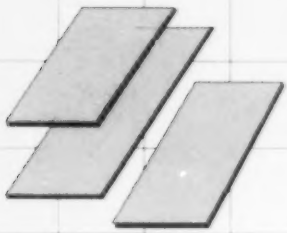

Fire
Commissioner's
Statistical Report

Alberta
LABOUR
Client Services Division
Fire Commissioner's Office

1 9 9 0

Alberta Labour
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ISSN 0822-3343
GSS-7-88-8-A-1275

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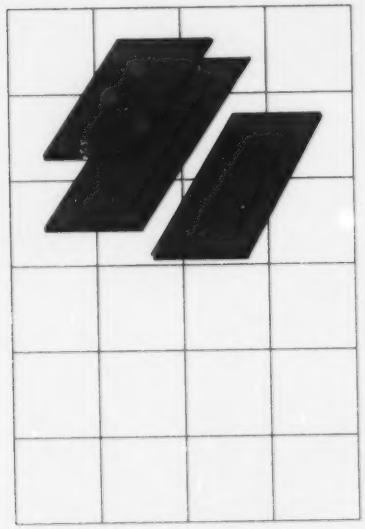

Introduction

Fire Commissioner's
Statistical Report

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71st Statistical Report of the Fire Commissioner

Fire Commissioner - T.B. Makey

For the third year in a row, the number of fires has decreased. Although encouraging, the fire deaths and dollar losses have increased which strongly indicate that fire prevention needs to continue to be an important part of today's society. The Fire Prevention Branch of Alberta Labour administers a number of programs designed to encourage fire prevention. These programs include public education, fire safety monitoring, advisory services and the collection and dissemination of fire loss data. Through the Alberta Fire Training School (AFTS), located in Vermilion, and field staff located in regional offices, training in all aspects of fire protection, including prevention and suppression, is made available to municipal and industrial fire departments. The Branch also assists with the enforcement of laws related to the suppression of arson. A small, highly skilled group of investigators assist fire and police departments in determining fire cause.

A total of 7,835 fires were recorded for the province in 1990. These fires resulted in 33 fire deaths, 15 deaths involving fire (see glossary), 440 injuries and $136.2 million in property losses. Compared to 1989, fire incidents decreased by 3.3 per cent and the number of fire deaths increased by 6.5 per cent. Deaths involving fire stayed the same and the number of injuries decreased by 15.4 per cent. The dollar losses increased by 25.6 per cent over the previous year.

Homes, representing one and two family dwellings, apartments/tenements and mobile homes, accounted for a total of 2,116 fires which caused 31 fire deaths, 2 deaths involving fire, 253 injuries and $42.5 million in property losses. Alarmingly, in 1990, 94 per cent of all fire deaths and 57.5 per cent of all fire injuries occurred in home fires. There were no smoke alarms in 47 per cent of the homes that had fires last year. However, it is encouraging to note that occupants were alerted in 81 per cent of the home fires where smoke alarms activated.

In 1990, the Branch acquired an additional IBM PS/2 computer to run in conjunction with SAS (Statistical Analysis System) software and instituted in-service training in SAS programming for Statistical support staff. This has further enhanced the Branch's efficiency in the dissemination of fire statistics and has enabled the generation of extensive data tabulations in formats desired by fire departments, the media, research institutes, universities and the public. The data in this report was generated using SAS. Beginning with this issue of the Statistical Report additional commentaries will be provided to make fire loss data more meaningful to the readers.

Fiscal year 1990/91 was another successful training year with increases in all areas. On site attendance at AFTS increased 8 per cent, extension and local courses increased 51 per cent for an overall increase in municipal fire training of 33.9 per cent. Attendance on industrial fire training courses increased 18.6 per cent. A grand total of 3228 attendees for all courses represents an increase of 30.9 per cent.

A total of 1,440 fire investigations were conducted by Branch staff, police and fire departments, which is an increase of 2 per cent over last year: 359 of these investigations were conducted by Branch staff. Of these 1,440 fires, 1,184 (82.2 per cent) were determined to be arson. This number is up from the 1989-90 total (965), the seriousness of this fire cause indicates the need to continue a strong effort to determine accurately the cause of all fires and to expose cases of arson, insurance fraud and other crimes.

The transition from an inspection/enforcement role to an advisory role continued for the Fire Services Advisers. In-service training continued. The Fire Services Advisers continued to play an important role in encouraging fire departments to participate in formal training programs and served regularly as instructors and evaluators. This contribution from the regional office staff has contributed markedly to the overall success of the training program.

Through the Alberta Fire Prevention Council, the interest in and enforcement of fire prevention matters is maintained. The Fire Prevention Council is a quasi-judicial body of 11 individuals appointed by the Lieutenant-Governor-in-Council from a broad range of private sector organizations with fire safety interests. The Council has a responsibility to advise the Minister of Labour on fire prevention matters and to hear appeals on orders issued by Branch inspectors or by fire department personnel authorized as local assistants to the Fire Commissioner.

As of December 31, 1990 the membership of the Council consisted of:

Harry Dowhan, P.Eng. - Chairman
Jack Edworthy - 1st Vice-chairman
Gilles Proulx - 2nd Vice-chairman

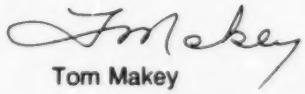
Raymond Caouette	Kent Lee
Ronald Faulkner	Don Murray
Margaret Borsos	Richard Veldhuis
Graeme Leadbeater	Christopher Hill

A total of 344 Orders were issued in 1990, compared to 420 in 1989 (a decrease of 18 per cent). Appeals to these Orders totalled 34 (a decrease of 10 per cent over 1989); 9 were withdrawn. Of the 25 appeals the Council dealt with, 4 were revoked, 1 has yet to be heard, 1 was adjourned sine-die, 5 were confirmed as written, and Council either varied the date of compliance or made variations to the requirements of the 14 remaining Orders appealed.

In June a number of Council members toured the Alberta Fire Training School. Laird Burton, Supervisor of the School addressed the Council members and gave a detailed overview of the purpose, goal and mission of the school. The Council members were then given the opportunity to tour the facility and to watch a number of training exercises that were in progress.

In addition to the appeal functions of the Fire Prevention Council, the Fire Commissioner has the power to review and vary or revoke orders, if necessary, and to grant permission for a local assistant to commence a prosecution. In 1990, 36 requests to prosecute for various infractions under the Fire Prevention Act were received. The Fire Commissioner granted permission for all the prosecutions to proceed. Fourteen of these were concluded in court and resulted in a total of $33,090 in fines. Fourteen of these prosecutions are still outstanding and 8 were withdrawn by fire departments. One court order was approved and obtained from Court of Queen's Bench.

The Fire Prevention Act and the regulations under the Act form the legal framework for fire prevention, but fire prevention is the responsibility of everyone. Even the smallest fire prevention action by an individual can have a pronounced effect on fire safety in Alberta. Together, we can collectively reduce the incidence of fire. Your efforts in helping to reduce the fire related losses in this province are sincerely appreciated.



Tom Makey

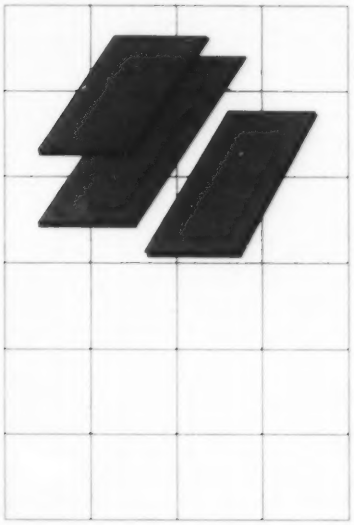
Comparative Statistical Summary

for the three years ending March 31, 1988, 1989 and 1990

	1988-89	1989-90	1990-91
Fire Services			
Building fire inspections conducted	1,902	1,227	482
Orders issued	29	32	6
Plans examined	316	149	129
Inventories of fire deparment equipment	1,003	1,208	46
Testing of fire fighting personnel	-	83	156
Meetings and lectures conducted	-	1,053	1,274
Attendance at meetings and lectures	6,347	3,682	4,247
Fire Investigations			
Investigations conducted by Branch	384	436	359
Investigations by other agencies	1,076	974	1,081
Total	**1,460**	**1,410**	**1,440**
Causes of Fires Investigated			
Arson	1,154	965	1,184
Accidental or unknown	306	444	254
Under investigation	0	1	2
Total	**1,460**	**1,410**	**1,440**
Fire Service Personnel Training			
Alberta Fire Training School Municipal Training Programs (Duration 44 hours)			
Part I Firefighter	81	75	87
Part II Firefighter	64	60	64
Part III Firefighter	42	40	37
Part IV Firefighter	21	38	22
Part III and IV Practical	17	12	11
Part V Firefighter	30	31	19
Part VI Firefighter	34	30	18
Part V and VI Practical	20	-	19
Pump Operator "A"	76	63	61
Pump Operator "B"	14	-	14
Fire Prevention for the Firefighter	10	18	8
Vehicle Extrication and Trench Rescue	19	21	41
Dangerous Goods Incident Control	39	40	68
Fire Officer C1 Building Construction	10	18	15
Fire Officer C2 Leadership	16	16	23
Fire Officer C3 Pre-emergency Planning	7	14	12
Fire Officer C4 Fire Suppression and Safety	6	8	16
Fire Officer C5 Strategy And Tactics (Theory)	37	35	37
Fire Officer C6 Strategy and Tactics (Practical)	13	12	28
Fire Officer C7 Fire Investigation	23	24	21
Fire Officer C8 Fire Prevention - Fire Protection Equipment	7	17	12
Fire Officer C9 Fire Prevention, Inspection and Public Education	10	20	20
Fire Officer C10 Human Relations and Management	17	18	21
Fire Officer C11 Dangerous Goods Incident Command	10	18	14
Fire Officer C12 Technical Writing Skills	14	18	14
Fire Officer C15 Public Relations and Public Speaking	12	15	20

Comparative Statistical Summary (cont'd)	1988-89	1989-90	1990-91
Fire Inspector DB Alberta Fire code	19	17	17
Fire Inspector D1 Water Supply	9	11	-
Fire Inspector D2 Standpipe Sprinkler Systems	11	36	38
Fire Services Instructor E1	28	26	38
Fire Services Instructor E2	17	18	22
Fire Services Instructor E3	9	8	7
Total Municipal Fire Department Personnel (AFTS)	**763**	**797**	**861**
Alberta Fire Training School Extension Courses			
Municipal Presentation (Duration 44 hours)			
Part I Firefighter	317	376	875
Part II Firefighter	130	182	312
Pump Operator "A"	69	68	141
Fire Prevention for the Firefighter	69	14	37
Vehicle Extrication	65	55	46
Dangerous Goods Incident Control	47	18	17
Parts III/IV Firefighter (Theory)	17	15	5
Parts V/VI Firefighter (Theory)	20	-	6
Fire Officer C1 Building Construction	50	38	38
Fire Officer C2 Leadership	14	21	-
Fire Officer C3 Pre-emergency Planning	38	43	18
Fire Officer C4 Suppression	8	26	21
Fire Officer C5 Strategy and Tactics (Theory)	33	181	70
Fire Officer C6 Strategy and Tactics (Practical)	-	11	-
Fire Officer C7 Investigation	42	21	25
Fire Officer C8 Fire Protection Equipment	-	-	-
Fire Officer C9 Fire Prevention	-	-	-
Fire Officer C10 Management	39	26	21
Fire Officer C12 Technical Writing Skills	-	38	19
Fire Officer C15 Public Relations and Public Speaking	-	-	-
Fire Inspector DA Building Codes & Standards	-	17	17
Fire Inspector DB Alberta Fire Code	-	17	17
Fire Inspector D2 Sprinkler and Standpipe Systems	-	-	41
Fire Services Instructor E1	15	5	67
Fire Services Instructor E2	-	23	13
Fire Services Instructor E3	9	8	-
Personnel Attending AFTS Extension and Local Courses	**982**	**1,203**	**1,806**
Total Municipal Fire Department Personnel	**1,745**	**2,000**	**2,667**
Industrial Programs (duration as indicated)			
Part I Industrial Firefighter (16h)	129	105	90
Part I-A Industrial Firefighter (8h)	108	115	186
Part I-B Industrial Firefighter (16h)	102	60	77
Part II Industrial Firefighter (16h)	84	81	106
Part III Industrial Firefighter (16h)	74	97	102
Aircraft Crash/Fire Response (Dry Chemical 24h)	-	15	-
Total Industrial Fire Department Personnel	**497**	**473**	**561**
Total Attendance AFTS Sponsored Courses	**2,242**	**2,473**	**3,228**

SECTION 1



Alberta Fire Casualties

Fire Commissioner's
Statistical Report

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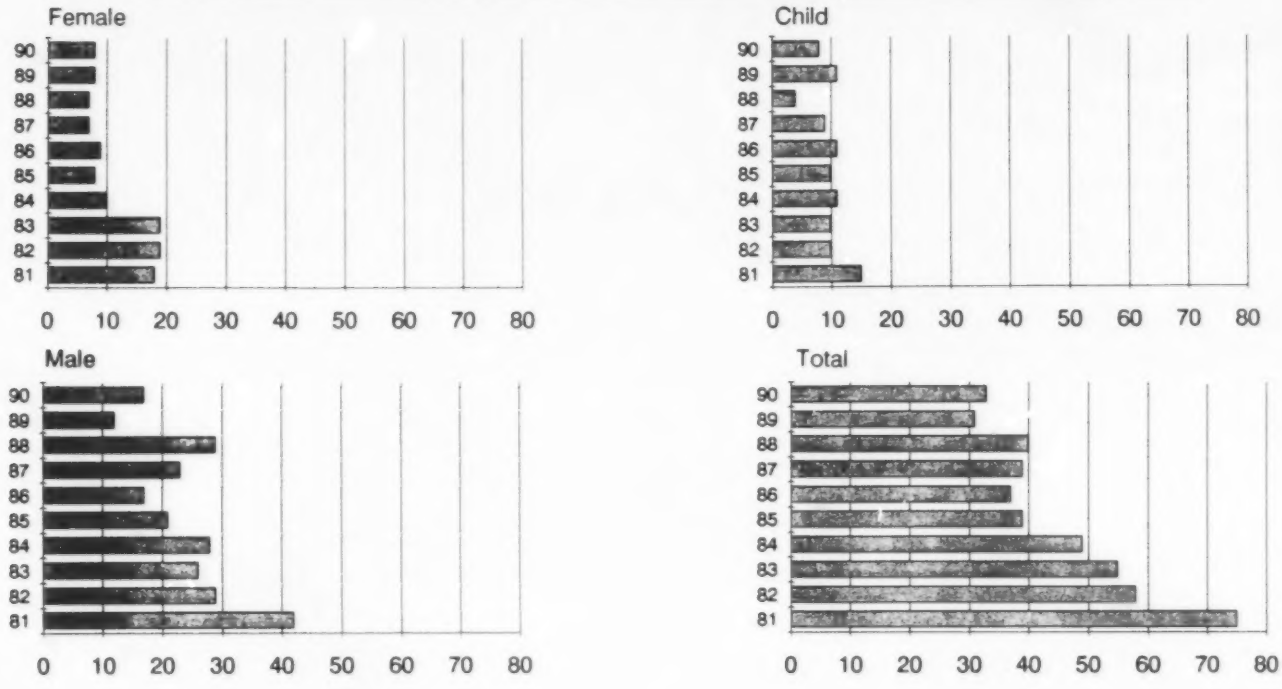
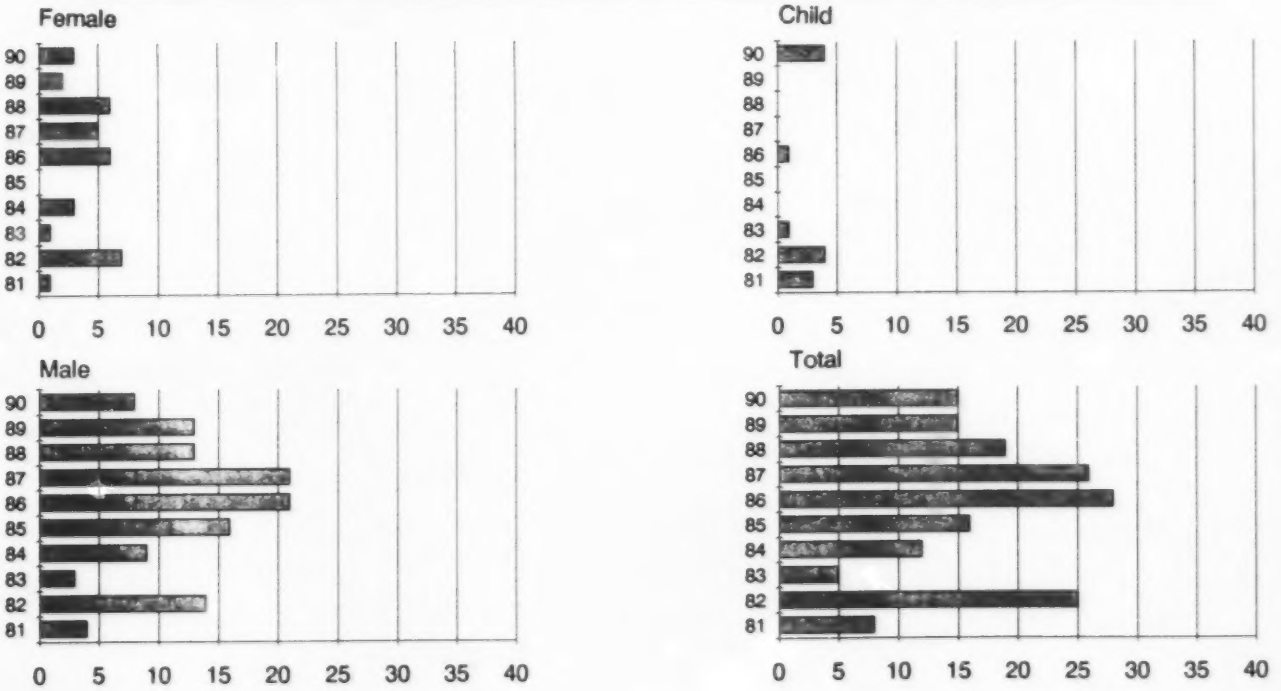
Fire Deaths 1981 - 1990



Deaths Involving Fire 1981 - 1990



Fire Deaths by Geographic Location - 1990

Death Rates

Year	Population	Fire Deaths	Other Deaths Involving Fire	Total Deaths	Fire Death Rate*	Fire Death Rate*
1981	2,278,000	75	8	83	3.3	2.9
1982	2,332,000	58	25	83	2.5	2.7
1983	2,336,000	55	5	60	2.4	2.2
1984	2,346,000	49	12	61	2.1	2.4
1985	2,318,000	39	16	55	1.7	2.2
1986	2,399,000	37	28	65	1.5	2.2
1987	2,402,000	39	26	65	1.6	2.0
1988	2,419,000	40	19	59	1.7	1.9
1989	2,449,000	31	15	46	1.3	1.9
1990	2,502,000	33	15	48	1.3	N/A
		Alberta				Canada

*Deaths per 100,000 population

Casualties by Age & Sex - 1990

Fire Deaths

		Age in Years								
		Unknown	0-5	6-15	16-25	26-35	36-45	46-55	56-65	Over 65	Total
Civilian	Female	0	2	1	2	1	2	1	2	0	11
	Male	1	3	2	3	2	3	4	1	3	22
Total Deaths		1	5	3	5	3	5	5	3	3	33

Commentary: No firefighter deaths were reported in 1990. This is the second year in a row where no firefighter deaths have been reported. The frequency of fire deaths in Alberta for 1990 was one death every 11 days. See page 10 for further information regarding deaths.

Injuries

		Age in Years								
		Unknown	0-5	6-15	16-25	26-35	36-45	46-55	56-65	Over 65	Total
Firefighter	Female	0	0	0	1	0	0	0	0	0	1
	Male	14	0	0	7	24	27	13	2	0	87
Civilian	Female	10	7	10	18	22	19	7	4	6	103
	Male	35	10	16	43	65	41	20	10	9	249
Total Injuries		59	17	26	69	111	87	40	16	15	440

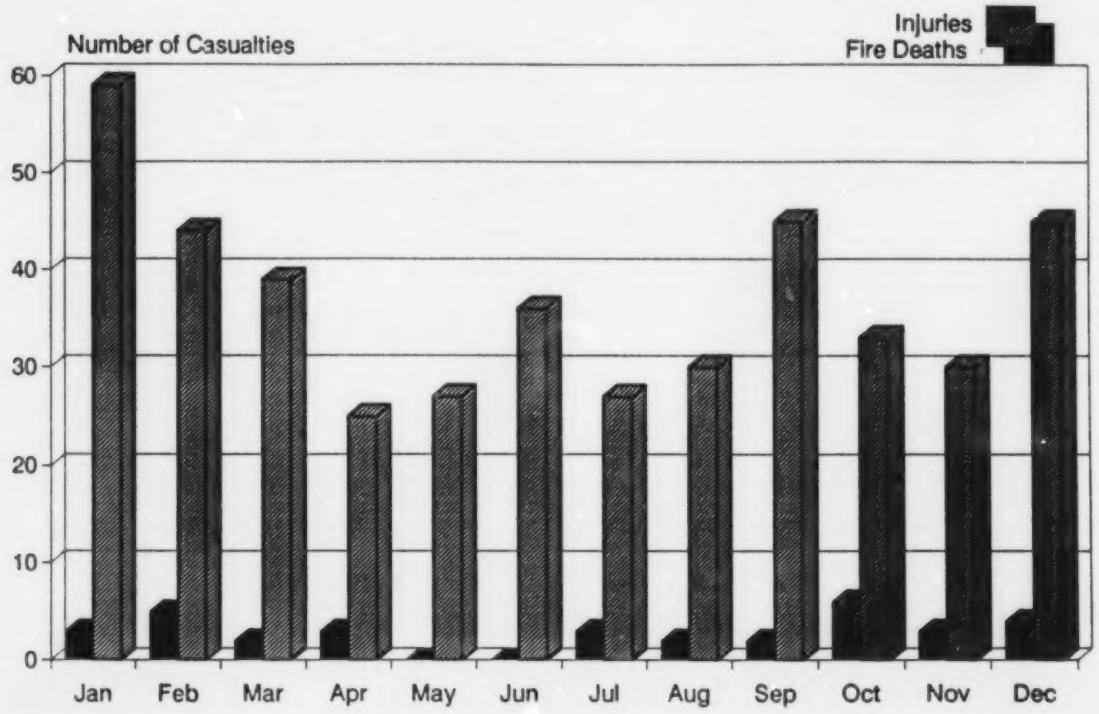
Commentary: Injuries decreased by 15% compared to 1989. Fifty-seven percent of all firefighter injuries occurred while attending fires in properties classified as residential. The frequency of a fire injury occurring in Alberta for 1990 was 1.2 injuries each day. See page 11 for further information regarding injuries.

Condition of Casualties - 1990

Condition of Casualty	Fire Deaths	% Of Total	Injuries	% Of Total
Condition unknown	8	24.2	26	5.9
Asleep at time of fire	6	18.2	69	15.7
Bedridden/physical handicap	0	0.0	1	0.2
Impaired: Alcohol/drugs/medicine	9	27.3	24	5.5
Awake and no physical/mental impairment at the time of fire	3	9.1	274	62.3
Under restraint or detention	0	0.0	0	0.0
Too young to react to fire	4	12.1	5	1.1
Mental handicap	0	0.0	1	0.2
Children left unattended	1	3.0	5	1.1
Condition of casualty - unclass.	2	6.1	35	8.0
Total	33	100.0	440	100.0

Commentary: The majority of fatal victims were impaired at the time of fire, while most of the injured victims were awake with no physical or mental impairment. Firefighters account for 20% of the injuries in this category. Firefighter injuries were down by 59% over last year and overall injuries were down by 15%.

Casualties by Month - 1990



Casualties by Time Period - 1990

Time Periods	Fire Deaths	% of Total	Injuries	% of Total
6:30 a.m.-2.29 p.m.	7	21.2	145	33.0
2:30 p.m.-10:29 p.m.	12	36.4	163	37.0
10:30 p.m.-6:29 a.m.	13	39.4	128	29.1
Unknown	1	3.0	4	.9
Total	33	100.0	440	100.0

Commentary: **Most fire deaths occurred between 10:30 p.m. and 6:29 a.m.; most injuries occurred between 2:30 p.m. and 10:29 p.m.**

Fire Deaths by Major Property Classifications - 1990

Property Classification		Fire Deaths		Deaths Involving Fire	
		No.	%	No.	%
Assembly	Food or Beverage Establishment	0	0.0	1	6.7
	Sub Total	0	0.0	1	6.7
Residential	One and Two Family Dwellings	15	45.5	2	13.3
	Apartment, Tenement	12	36.4	0	0.0
	Dormitory	1	3.0	0	0.0
	Mobile Home/Trailer	4	12.1	0	0.0
	Sub Total	32	97.0	2	13.3
Industrial Manufacturing	Chemicals/Petroleum Paints, Plastics	0	0.0	3	20.0
	Sub Total	0	0.0	3	20.0
Storage Properties	Flammable Liquid Gases/Petro. Prod.	1	3.0	3	20.0
	Sub Total	1	3.0	3	20.0
Special Property - Transportation Equipment	Ground Transport Vehicle	0	0.0	4	26.7
	Aircraft	0	0.0	1	6.7
	Sub Total	0	0.0	5	33.4
Miscellaneous Property	Farm Facilities	0	0.0	1	6.7
	Sub Total	0	0.0	1	6.7
	Total	33	100.0	15	100.0

Commentary: **Thirty-two of the thirty-three fire deaths occurred in residential occupancies. Eighteen of the residential deaths occurred in single family residences. Sources of ignition attributed to fire deaths (number within brackets), were: smoker's material (11); source unknown (9); cooking equipment (6), 4 of these involved the ignition of cooking oil; electrical distribution equipment (4), 2 of these were attributed to mechanical, electrical failure or malfunction; match/lighter not associated with smoking (2), both deaths were children less than 6 years of age; and space heater (1).**

See page 45 for further information on the value of having smoke alarms installed in homes.

Injuries by Major Property Classifications - 1990

Property Classification		Minor Injury	Light Injury	Serious Injury	Total	% Of Total
Assembly	Church, Funeral Parlour	1	0	0	1	0.2
	Museum, Art Gallery, Library	0	1	0	1	0.2
	Food or Beverage Establishment	4	1	0	5	1.1
	Sub Total	5	2	0	7	1.5
Institutional	Prison, Jail, Reformatory	1	0	0	1	0.2
	Child Care	2	0	0	2	0.5
	Hospital, Sanatorium, Clinic	0	0	1	1	0.2
	Sub Total	3	0	1	4	0.9
Residential	One and Two Family Dwellings	87	36	5	128	29.1
	Apartment, Tenement	73	26	5	104	23.6
	Rooming, Boarding House	0	7	1	8	1.8
	Hotel	9	15	0	24	5.5
	Motor Hotel	1	1	0	2	0.5
	Mobile Home, Trailer	14	9	2	25	5.7
	Sub Total	184	94	13	291	66.2
Business and Personal Service	Personal Service	1	0	0	1	0.2
	Sub Total	1	0	0	1	0.2
Mercantile	Food, Beverage Sale	0	1	0	1	0.2
	Books, Newspapers, Drugs, Specialties	1	0	0	1	0.2
	Repair Shop, Laundry, Dry Cleaner	0	2	1	3	0.7
	Motor Vehicles, Boats, Sales & Service	4	0	5	9	2.0
	Miscellaneous	1	0	0	1	0.2
	Sub Total	6	3	6	15	3.3
Industrial Manufacturing	Chemicals, Petroleum, Paints, Plastics	3	0	2	5	1.1
	Wood, Furniture, Paper, Printing	0	1	0	1	0.2
	Food Processing	1	0	1	2	0.5
	Sub Total	4	1	3	8	1.8

(CONTINUED)

Injuries by Major Property Classifications - 1990 (cont'd)

Property Classification		Minor Injury	Light Injury	Serious Injury	Total	% Of Total
Storage Properties	Miscellaneous	1	0	0	1	0.2
	Flammable Liquid, Gases, Petroleum Products	3	0	3	6	1.4
	Wood, Furniture, Paper and Products	1	1	0	2	0.5
	Chemicals, Plastics, Paints	1	0	0	1	0.2
	Vehicle	9	7	4	20	4.5
	Sub Total	15	8	7	30	6.8
Special Properties - Transportation Equipment	Outdoor Property	10	11	3	24	5.5
	Under Construction/Demolition: Vacant	5	3	4	12	2.7
	Watercraft	1	0	0	1	0.2
	Rail Transport Vehicle and Equipment	0	1	1	2	0.5
	Ground Transport Vehicle	11	8	9	28	6.4
	Aircraft	0	2	0	2	0.5
	Special Vehicles	2	2	1	5	1.1
	Sub Total	29	27	18	74	16.9
Miscellaneous Property	Miscellaneous	1	0	0	1	0.2
	Farm Facilities	2	0	2	4	0.9
	Mining, Quarrying	0	4	1	5	1.1
	Sub Total	3	4	3	10	2.2
	Total	250	139	51	440	100.0

Commentary: **The majority (66.2%) of all fire related injuries occurred in the residential property classification. One and two family dwellings; apartment, tenement and mobile home, trailer occupancies accounted for 58.4% of the total fire injuries. Fires in the special properties classification was the next highest category accounting for 16.9% of the total fire injuries. Fires in ground transport vehicles (6.4%) and outdoor properties (5.5%) accounted for the majority of fire injuries in this property classification. Fire prevention personnel can direct their fire prevention programs/activities towards these two property classifications to reduce the number of civilian and firefighter fire injuries.**

Fire Deaths by Act or Omission - 1990

Act or Omission		Fire Deaths		Deaths Involving Fire	
		No.	%	No.	%
Incendiary	Arson: For Vengeance	0	0.0	1	6.7
	Arson/Set Fire: Unclassified	0	0.0	2	13.3
	Sub Total	0	0.0	3	20.0
Misuse of Source of Ignition	Smoker's Material	11	33.3	0	0.0
	Child Playing With	2	6.1	0	0.0
	Sub Total	13	39.4	0	0.0
Misuse of Material Ignited	Over Heated Cooking Oil/Wax	2	6.1	0	0.0
	Sub Total	2	6.1	0	0.0
Mechanical, Electrical Failure, Malfunction	Mechanical Part Failure/Break/Leak	0	0.0	3	20.0
	Electric Short Circuit	3	9.1	0	0.0
	Sub Total	3	9.1	3	20.0
Construction, Design, Install. Deficiency	Installed Too Close To Combustible	1	3.0	0	0.0
	Sub Total	1	3.0	0	0.0
Misuse of Equipment	Misuse Of Equipment: Unclassified	0	0.0	1	6.7
	Sub Total	0	0.0	1	6.7
Human Failing	Accident	1	3.0	0	0.0
	Suspect Use Of Drugs/ Alcohol/Medicine	1	3.0	0	0.0
	Asleep +Suspect:Drugs Alcohol/Medicine	1	3.0	0	0.0
	Ignorance Of Hazard	1	3.0	1	6.7
	Human Failing: Unclassified	1	3.0	0	0.0
	Sub Total	5	15.0	1	6.7
Vehicle Accident	Automobile Accident	0	0.0	1	6.7
	Aircraft Accident	0	0.0	1	6.7
	Sub Total	0	0.0	2	13.4
Miscellaneous	Act/Omission:Unknown	9	27.3	5	33.3
	Sub Total	9	27.3	5	33.3
	Total	33	100.0	15	100.0

Commentary: **Misuse of smoker's material was the leading cause of fatal fires, followed by fires caused by electrical short circuits.**

Injuries by Act or Omission - 1990

Act or Omission		Minor Injury	Light Injury	Serious Injury	Total	% Of Total
Incendiary	Arson: for Vengeance	2	0	1	3	0.7
	Arson: to Cover Crime	1	1	0	2	0.5
	Suspected Arson	3	3	1	7	1.6
	Arson/Set Fire-Reason Unknown	7	6	0	13	3.0
	Vandalism/Mischief No Charges	1	3	0	4	0.9
	Sub Total	14	13	2	29	6.7
Misuse of Source of Ignition	Smoker's Material	37	16	4	57	13.0
	Thawing	1	2	0	3	0.7
	Inadequate Control:Open Fire	4	3	0	7	1.6
	Child Playing With	21	4	2	27	6.1
	Welding/Cutting Too Close	1	4	1	6	1.4
	Torch Too Close To	1	1	0	2	0.5
	Misuse of Source of Ignition :Unclassified	4	0	0	4	0.9
	Sub Total	69	30	7	106	24.2
Misuse of Material Ignited	Accidental Fuel Spill	4	2	2	8	1.8
	Improper Fueling	3	1	3	7	1.6
	Flammable Liquid to Kindle Fire	2	1	3	6	1.4
	Cleaning/Washing Parts	5	0	1	6	1.4
	Improper Container	2	3	1	6	1.4
	Over Heated Cooking Oil/Wax	26	9	0	35	8.0
	Combustible:Placed Too Close	4	1	0	5	1.1
	Improper Storage	0	1	0	1	0.2
	Misuse of Material First Ignited:unclassified	0	1	1	2	0.5
	Sub Total	46	19	11	76	17.4
Mechanical, Electrical Failure, Malfunction	Mechanical, Electrical Failure/Malfun.:Unknown	3	2	3	8	1.8
	Mechanical Part Failure/Break/Leak	19	10	2	31	7.0
	Automatic Control Failure	1	0	0	1	0.2

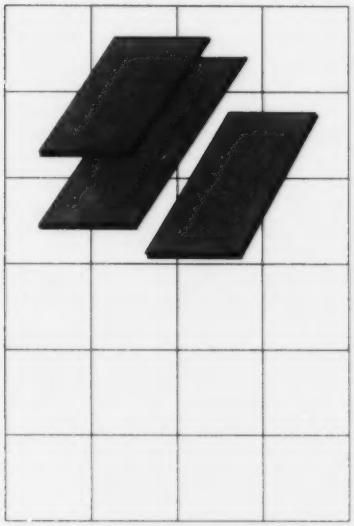
(CONTINUED)

Injuries by Act or Omission - 1990 (cont'd)

Act or Omission		Minor Injury	Light Injury	Serious Injury	Total	% Of Total
Mechanical, Electrical Failure, Malfunction	Electric Short Circuit	17	4	1	22	5.0
	Mechanical/Electrical Part Worn Out	1	0	0	1	0.2
	Mechanical/Electrical Failure/Malfunction: Unclassified	1	13	2	16	3.6
	Sub Total	42	29	8	79	17.8
Construction, Design or Installation Deficiency	Design Deficiency	1	5	2	8	1.8
	Installed Too Close To Combustible	1	1	0	2	0.5
	Other Installation Deficiency	1	0	0	1	0.2
	Sub Total	3	6	2	11	2.5
Misuse of Equipment	Misuse of Equipment: Unclassified	2	0	0	2	0.5
	Sub Total	2	0	0	2	0.5
Human Failing	Human Failing:Unknown	0	2	0	2	0.5
	Asleep	10	0	0	10	2.3
	Loss of Judgement/Panic	1	0	0	1	0.2
	Disability-Physical/Mental	2	0	0	2	0.5
	Accident	3	2	2	7	1.6
	Suspect Use of Alcohol/Drugs/Medicine	5	9	2	16	3.6
	Asleep +Suspect: Alcohol/Drugs/Medicine	5	1	0	6	1.4
	Ignorance of Hazard	15	6	7	28	6.4
	Human Failing:Unclass.	1	1	0	2	0.5
	Sub Total	42	21	11	74	17.0
Vehicle Accident	Automobile Accident	1	0	0	1	0.2
	Indust. Truck Accident	0	0	1	1	0.2
	Aircraft Accident	0	2	0	2	0.5
	Sub Total	1	2	1	4	0.9
Miscellaneous	Act/Omission:Unknown	29	17	9	55	12.5
	Act/Omission:Unclass.	2	2	0	4	0.9
	Sub Total	31	19	9	59	13.4
	Total	250	139	51	440	100.0

Commentary: **The act or omission responsible for the majority of fire injuries was "Misuse of Source of Ignition", and was attributed to "Smoker's Material" at 13.0% followed by, "Child Playing With" at 6.1% for a total of 19.1%. Fires from "Overheated Cooking Oil/Wax" within the "Misuse of Material Ignited" category caused 8.0% of all injuries. Within the "Mechanical, Electrical Failure, Malfunction" category, "Mechanical Part Failure/Break/Leak" and "Electrical Short Circuit" were responsible for 7.0% and 5.0% respectively or 12.0% of the total fire injuries. Fire prevention personnel may again be able to have an impact in reducing fire related injuries by directing their educational programs/activities towards those act or omission categories showing the highest injury totals.**

SECTION 2



Alberta Fire Loss Information

Fire Commissioner's
Statistical Report

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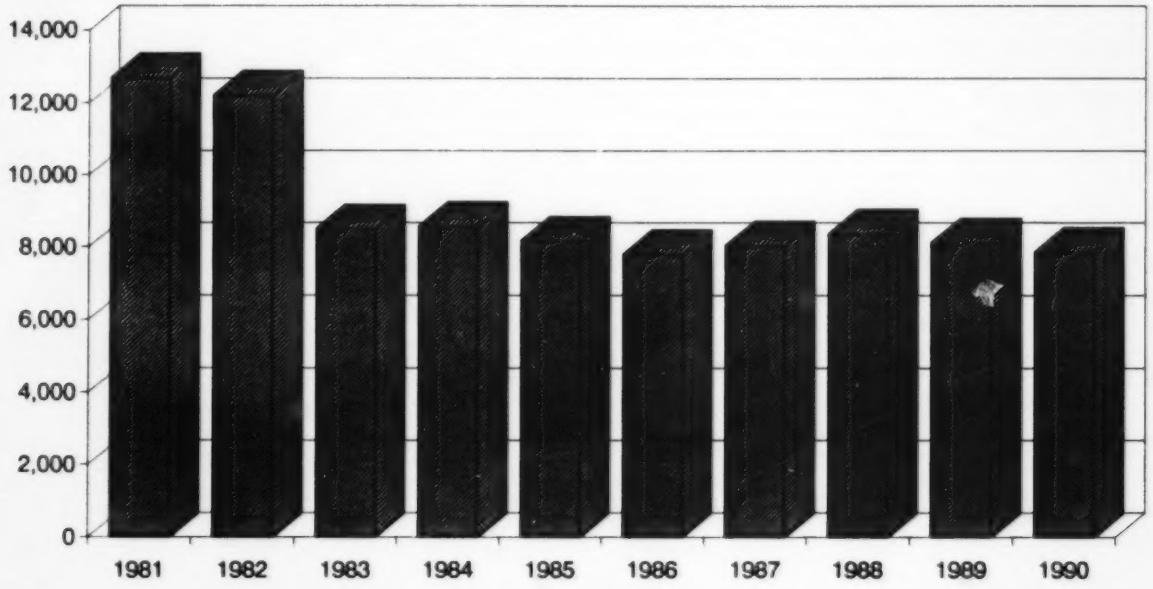
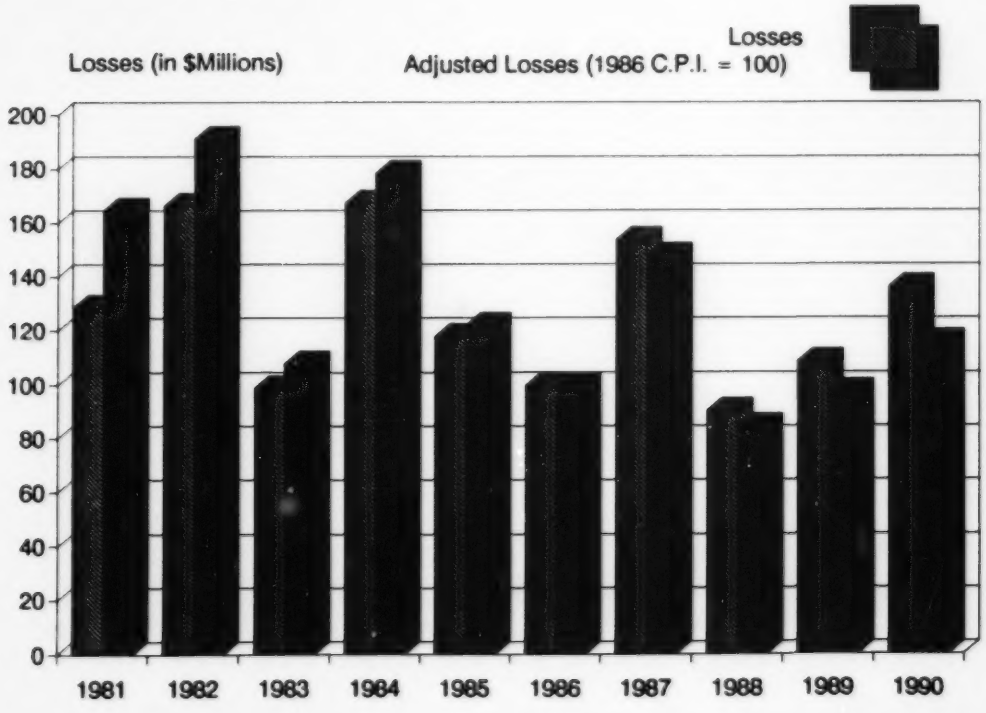
Fires and Losses 1981 - 1990



Commentary: Although the fires have dropped substantially from 1981 to 1990, a large portion of the drop was due to a change in the reporting procedure implemented in 1983. The change was that grass and garbage fires were included as fires only when they extended to other property causing dollar loss.



Commentary: Losses have increased by 5.4% between 1981 and 1990 and adjusted losses have decreased by 29.7%.

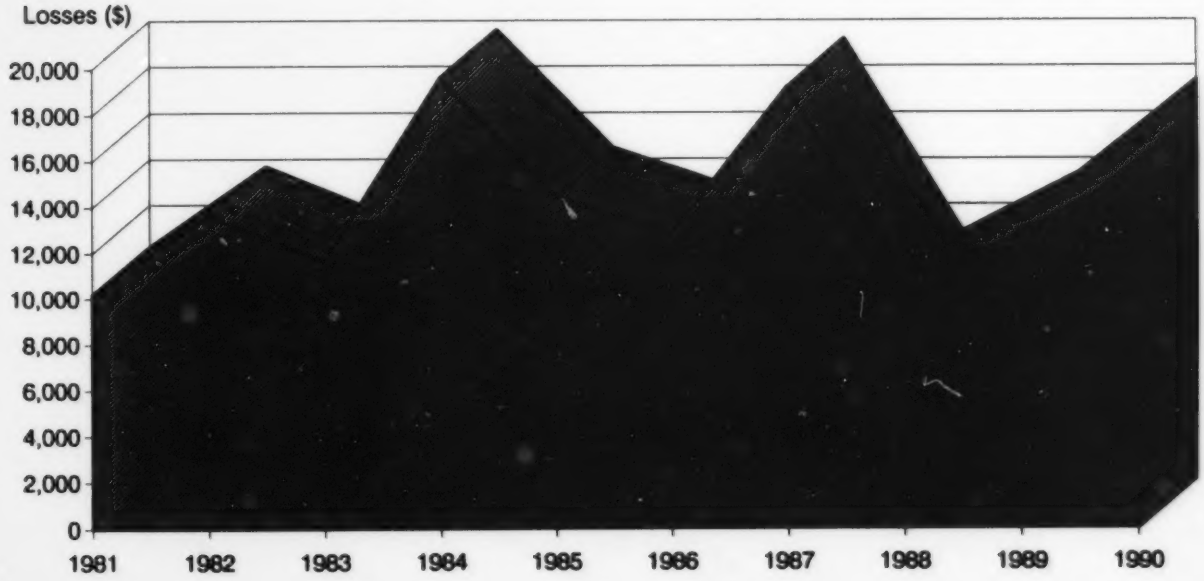
Fire Rates and Per Capita Losses 1981 - 1990

Year	Population	Number of Fires	Fire * Rate	Loss Estimate	Loss Per Capita
1981	2,267,000	12,659	5.6	128,600,498	56.73
1982	2,345,000	12,191	5.2	166,471,410	70.99
1983	2,366,000	8,482	3.6	98,720,370	41.72
1984	2,358,000	8,549	3.6	167,449,997	71.01
1985	2,338,000	8,151	3.5	117,924,685	50.44
1986	2,372,000	7,777	3.3	99,683,507	42.03
1987	2,380,000	8,019	3.4	153,763,812	64.61
1988	2,397,000	8,347	3.5	90,210,838	37.63
1989	2,415,000	8,104	3.4	108,442,251	44.90
1990	2,502,000	7,835	3.1	136,175,648	54.43

*Fire Rate = Number of fires per 1000 population

Commentary: The fire rate of 3.1 for 1990 was the lowest for any year during the 10-year period. The number of fires has decreased over the past three years by 512 (6.1%). There has been, however a marked increase in the value of property destroyed by fire $45,964,810 or a 51.0% increase over the same 3 year period.

Average Loss Per Fire 1981 - 1990



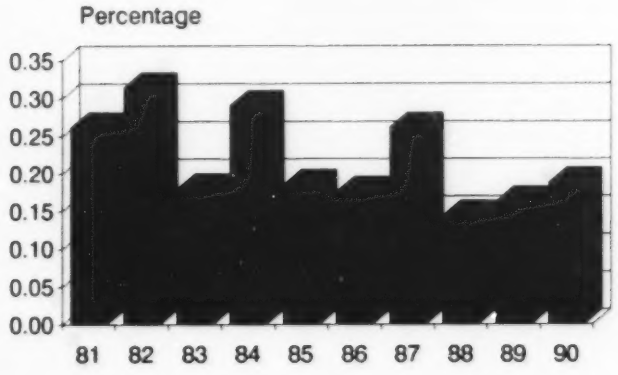
Commentary: The average loss per fire increased by 71.0% from 1981 to 1990.

Fire Losses
Related to Economic Indices 1981 - 1990

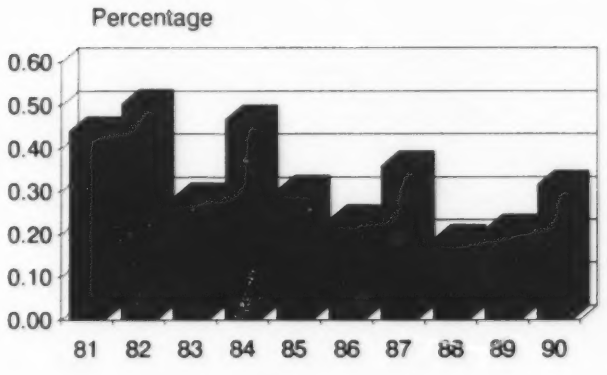
Years	Fire Losses (in $Millions)	Gross Domestic Product* (in $Millions)	% Of Gross Domestic Product	Personal Income* (in $Millions)	% Of Personal Income
1981	128.6	49,037	0.26	29,170	0.44
1982	166.5	52,838	0.32	33,054	0.50
1983	98.7	54,812	0.18	34,442	0.29
1984	167.4	57,458	0.29	35,840	0.47
1985	117.9	63,524	0.19	38,762	0.30
1986	99.7	56,553	0.18	42,366	0.24
1987	153.8	58,758	0.26	42,753	0.36
1988	90.2	62,544	0.14	47,859	0.19
1989	108.4	66,748	0.16	51,067	0.21
1990	136.2	72,580	0.19	43,260	0.31

* Source: Bureau of Statistics, Alberta Treasury

Fire Losses As A Percentage of Gross Domestic Product

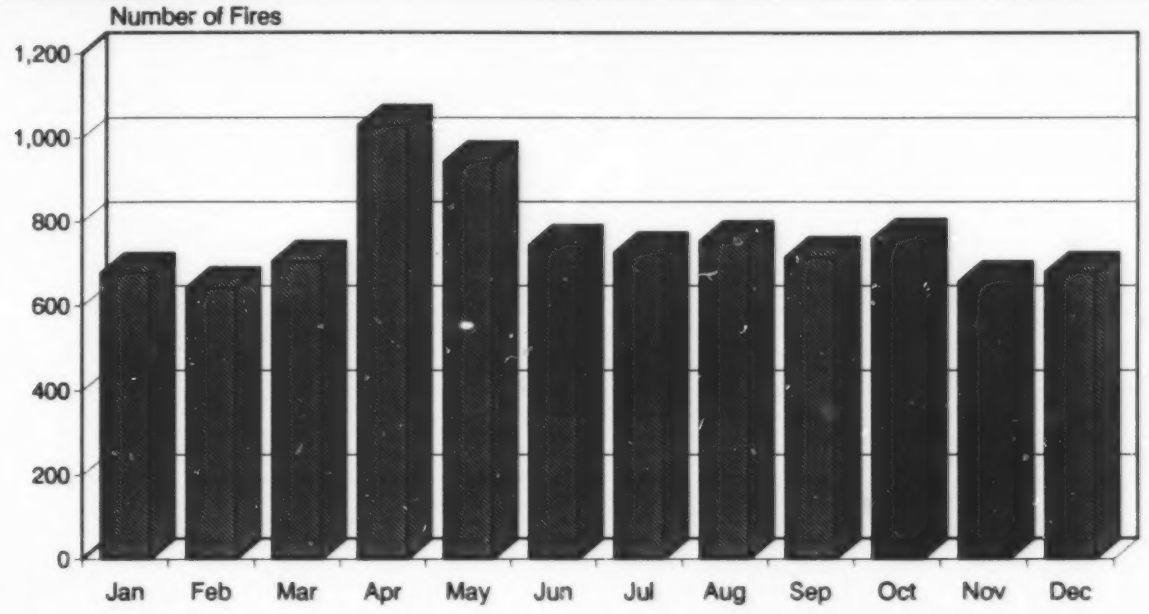


Fire Losses As A Percentage of Personal Income

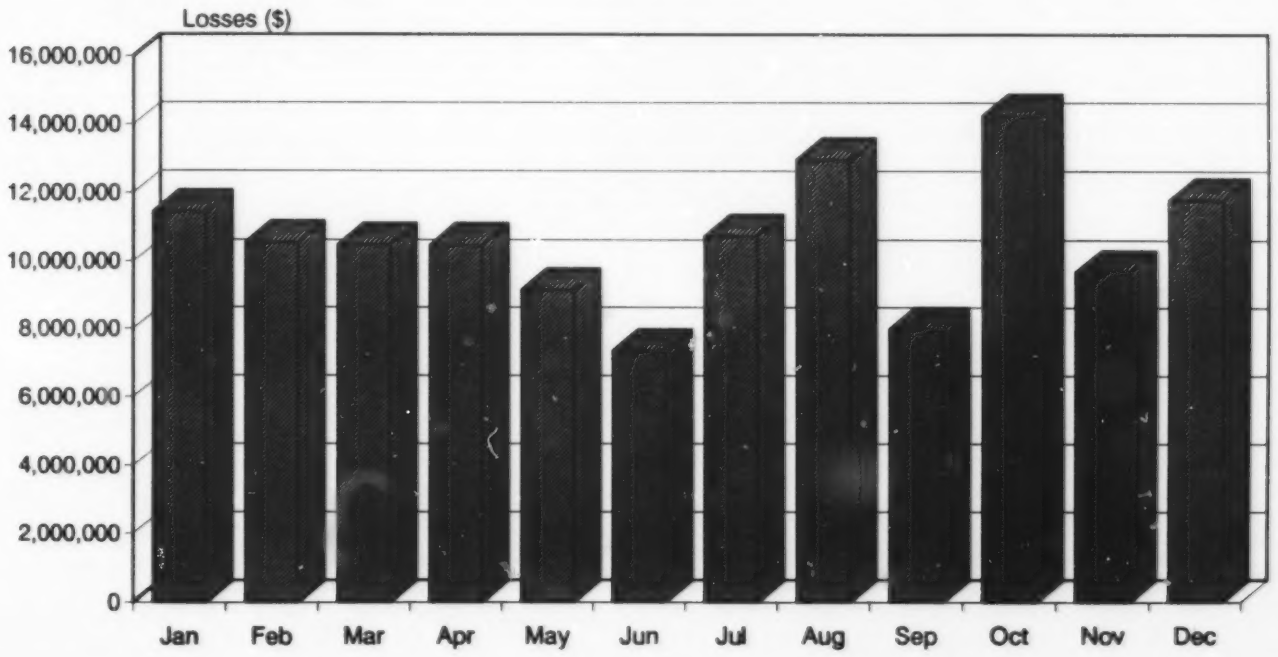


Commentary: As a percentage of gross domestic product, fire losses have decreased by 26.9% between 1981 and 1990. As a percentage of personal income, fire losses have decreased by 29.5% over the same period.

Average Number of Fires by Month 1981 - 1990

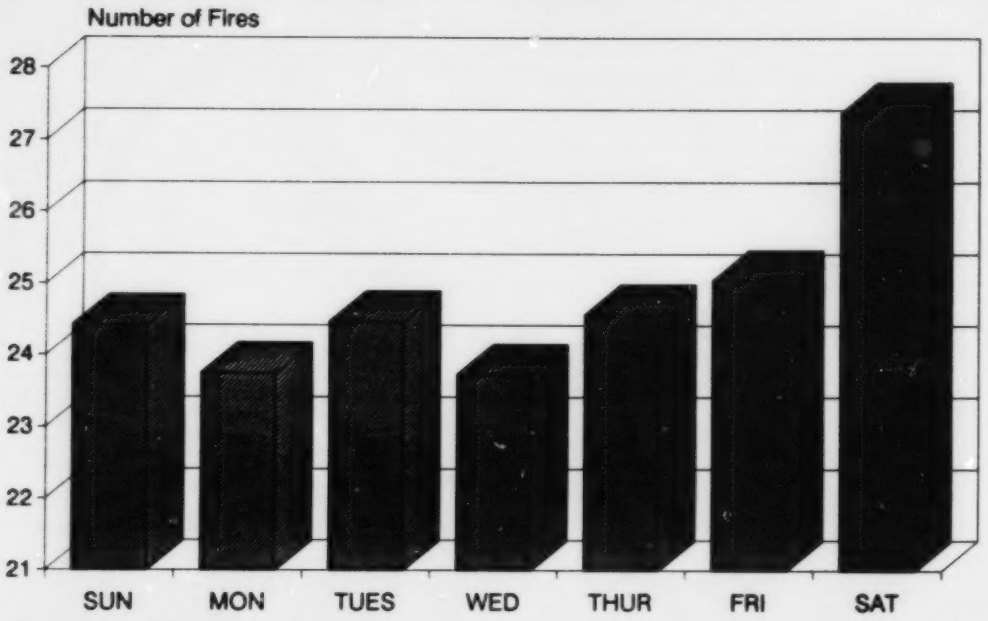


Average Fire Loss by Month 1981 - 1990

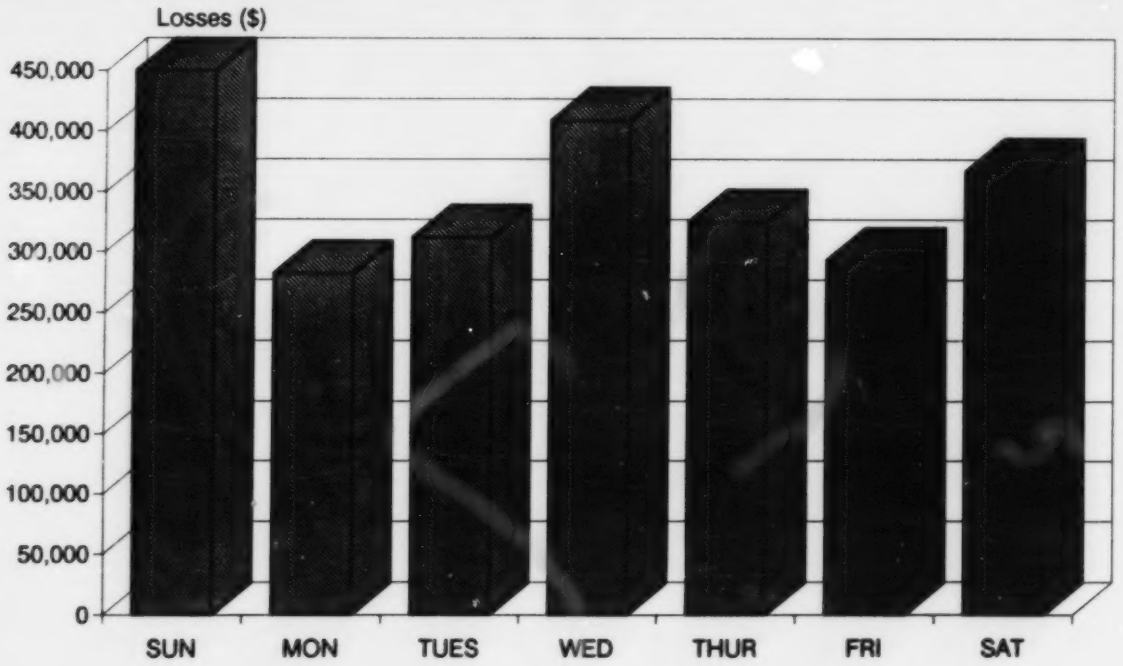


Commentary: While the average number of fires was greatest in the months of April and May, average losses were highest in October and then August. The highest average loss per fire per month ($18,800) was in October.

Average Number of Fires by Day of Week 1981 - 1990

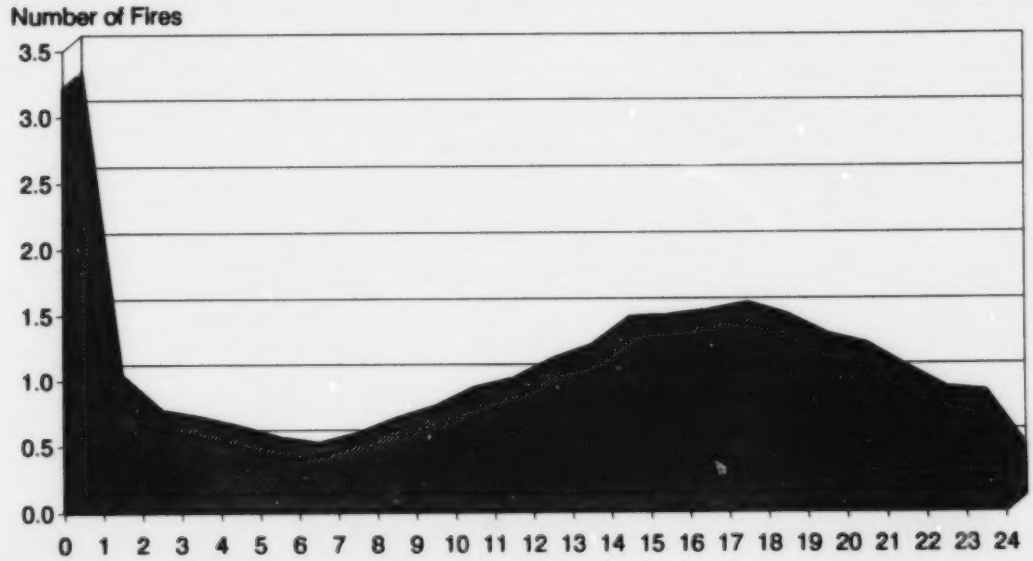


Average Fire Loss by Day of Week 1981 - 1990

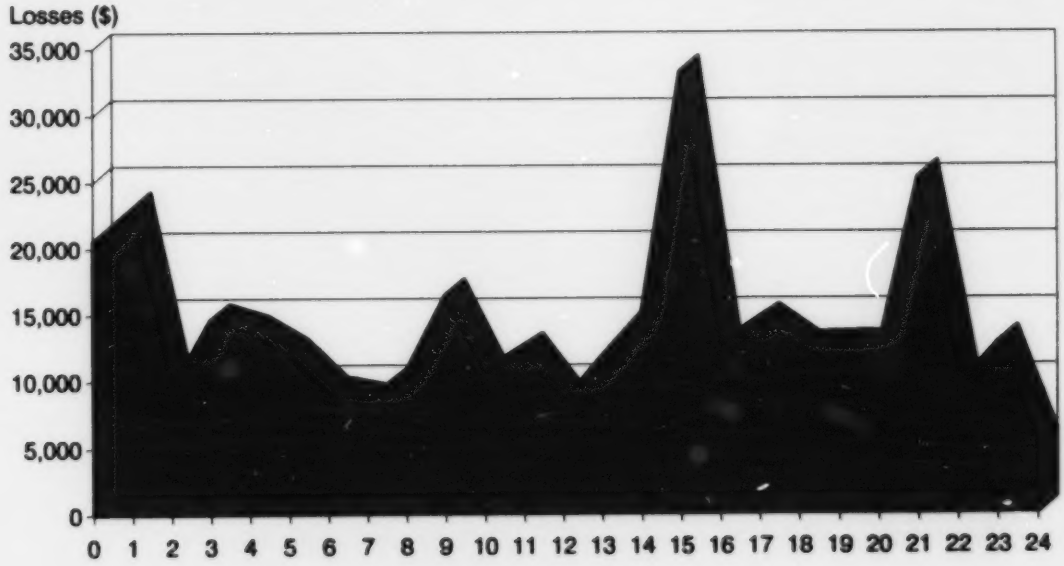


Commentary: From 1981 to 1990, the highest average number of fires on any day of the week occurred on Saturday. Sunday had higher losses than any other day, with Monday having the lowest losses. The day of the week where most of the fires occurred (Saturday) and the days with the highest average losses has remained the same for the last three 10-year periods, 1979-1988, 1980-1989 and 1981-1990.

Average Number of Fires by Hour of Day 1981 - 1990



Average Fire Loss by Hour of Day 1981 - 1990



Commentary: While the greatest number of fires occurred between the hours of 1400 (2:00 p.m.) and 1800 (6:00 p.m.), the greatest losses generally occurred at 0100 (1:00 a.m.), 1500 (3:00 p.m.) and 2100 (9:00 p.m.).

Fires by Loss Category - 1990

	FIRES	% FIRES	Losses	% Losses
$1 - 99	1,134	14.5	29,157	0.0
$100 - 999	2,117	27.0	865,435	0.6
$1,000 - 9,999	2,972	37.9	9,768,178	7.2
$10,000 - 49,000	1,123	14.3	24,663,662	18.1
$50,000 - 249,000	416	5.3	38,748,659	28.5
$250,000 - 499,999	39	0.5	13,074,698	9.6
$500,000 and over	34	0.4	49,025,859	36.0
Total	7,835	100.0	136,175,648	100.0

1990 Large Loss Fires ($500,000 and over)

Property Class	Date	Location	Occupancy	Act or Omission	Losses	Deaths	Injuries
Assembly	Apr. 1	Calgary	Library	Incendiary	646,819	0	0
Residential	Feb. 5	Edmonton	Apartment	Smoker's Material	522,336	0	14
	Feb. 27	Olds	Hotel	Unknown	1,500,000	0	0
	Sept. 9	Three Hills	Hotel	Unknown	602,830	0	8
	Sept.23	Edmonton	Apartment	Leak	2,117,558	0	1
	Sept.23	Edmonton	Apartment	Incendiary	1,007,867	0	0
	Dec. 26	Edmonton	Apartment	Unknown	1,300,000	1	1
Mercantile	Feb. 7	Ft. McMurray	2nd Hand Store	Unknown	780,052	0	0
	Feb. 8	Drayton Valley	Maintenance Shop	Fuel Spill	518,000	0	0
	Feb. 27	Lloydminster	Clothing Store	Electrical Short	1,036,791	0	0
	Mar. 20	Ft. McMurray	Market	Incendiary	991,849	0	0
	Aug. 21	Milk River	Supermarket	Mech/Elect. Failure	651,000	0	0
Industrial	Jan. 13	Ft. McMurray	Dry Cleaners	Unknown	850,512	0	0
Manufacturing	Jan. 31	Cty. #31	Peat Moss	Torch Too Close To	750,000	0	0
	May 24	Cty. #20	Refinery	Part Break	2,500,000	2	1
	Sept. 8	I.D. #23	Sawmill	Unknown	525,000	0	0
	Sept. 9	I.D. #17	Planer Mill	Unknown	500,000	0	0
	Sept.17	Airdrie	Furniture Factory	Unknown	7,018,628	0	0
	Oct. 4	Bow Island	Seed & Feed Mill	Incendiary	1,540,000	0	0
	Nov. 1	M.D. #99	Refinery	Mechanical Failure	1,252,500	0	0
	Nov. 15	Edmonton	Metal Product Mfg.	Unknown	500,000	0	0
	Dec. 23	Cty. #17	Gas Processing	Unknown	1,000,000	1	1
Storage	May 8	Calgary	Lumber Yard	Improper Storage	4,000,000	0	1
	July 26	M.D. #90	Warehouse	Improper Storage	500,000	0	0
	Aug. 10	Calgary	Tire Storage	Grinding to Close	1,105,000	0	0
	Oct. 30	Edmonton	Heavy Machine Storage	Incendiary	819,287	0	0
	Dec. 7	Beaverlodge	Repair Shop	Installed Too Close	1,374,500	0	0
	Dec. 23	Cty. #24	Grain Elevator	Unknown	1,765,330	0	0
Special	Mar. 29	I.D. #16	Bldg. Under Const.	Misuse of Material	500,000	0	0
	May 5	I.D. #17	Bridge	Inadequate Control Fire	500,000	0	0
	June 18	Camrose	Bldg Under Renovation	Torch to Close	1,600,000	0	0
	July 17	Calgary	Airplane	Wheel Collapsed	7,000,000	0	0
	Aug. 18	M.D. #87	Bridge	Incendiary	750,000	0	0
Miscellaneous	July 13	Cty. #12	Refinery	Mech. Leak/Break	1,000,000	0	0

Fires by Major Property Classifications - 1990

Property Classification		No. Of Fires	% Of Total	Losses	% Of Total
Assembly	Amusement, Recreation Place	19	0.2	235,435	0.2
	School, College, University	46	0.6	293,925	0.2
	Church, Funeral Parlour	17	0.2	1,484,874	1.1
	Clubs, Social, Sport	7	0.1	46,550	0.0
	Food or Beverage Establishment	90	1.1	2,062,031	1.5
	Passenger Terminal, Station	2	0.0	40,500	0.0
	Museum, Art Gallery, Library	6	0.1	700,027	0.5
	Theatre, Studio, Auditorium	3	0.0	216,445	0.2
	Sub Total	190	2.3	5,079,787	3.7
Institutional	Miscellaneous	1	0.0	100	0.0
	Prison, Jail, Reformatory	8	0.1	24,519	0.0
	Home for the Aged	10	0.1	9,703	0.0
	Hospital, Sanatorium, Clinic	24	0.3	41,764	0.0
	Child Care	5	0.1	25,361	0.0
	Sub Total	48	0.6	101,447	0.1
Residential	One and Two Family Dwellings	1422	18.1	28,047,973	20.6
	Apartment, Tenement	507	6.5	9,606,016	7.1
	Hotel	53	0.7	2,806,504	2.1
	Dormitory	12	0.2	268,402	0.2
	Mobile Home, Trailer	311	4.0	5,667,733	4.2
	Miscellaneous	4	0.1	3,142	0.0
	Rooming, Boarding House	9	0.1	113,412	0.1
	Motor Hotel	19	0.2	620,530	0.5
	Sub Total	2337	29.9	47,133,712	34.6
Business and Personal Service	Miscellaneous	1	0.0	2,800	0.0
	Office	45	0.6	1,262,447	0.9
	Personal Service	4	0.1	9,500	0.0
	Sub Total	50	0.7	1,274,747	0.9
Mercantile	Miscellaneous	13	0.2	1,097,940	0.8
	Food, Beverage Sale	15	0.2	2,416,671	1.8
	Textile, Wearing Apparel Sale	7	0.1	604,252	0.4
	Books, Newspapers, Drugs, Specialties	16	0.2	443,797	0.3
	Repair Shop, Laundry, Dry Cleaner	25	0.3	1,008,756	0.7
	Motor Vehicles, Boats, Sales & Service	37	0.5	1,792,938	1.3

(CONTINUED)

Fires by Major Property Classifications - 1990 (cont'd)

Property Classification		No. Of Fires	% Of Total	Losses	% Of Total
Mercantile (cont'd)	Department, Variety Store	20	0.3	1,340,266	1.0
	Recreation, Hobby Supplies	9	0.1	494,441	0.4
	Furniture, Appliance, Hardware Sales	3	0.0	880,552	0.6
	Sub Total	145	1.9	10,079,613	7.4
Industrial Manufacturing Properties	Miscellaneous	6	0.1	973,782	0.7
	Wood, Furniture, Paper, Printing	34	0.4	9,847,135	7.2
	Metal/(Products), Elect. Equip. & Appl.	39	0.5	1,514,060	1.1
	Food Processing	19	0.2	2,317,608	1.7
	Chemicals, Petroleum, Paints, Plastics	21	0.3	5,820,968	4.3
	Wearing Apparel, Footwear	2	0.0	30,000	0.0
	Textiles	1	0.0	200	0.0
	Vehicles and Related Equipment	2	0.0	9,000	0.0
	Sub Total	124	1.5	20,512,753	15.1
Storage Properties	Miscellaneous	21	0.3	877,851	0.6
	Agricultural Products	26	0.3	2,364,794	1.7
	Wood, Furniture, Paper and Products	21	0.3	4,150,460	3.0
	Vehicle	254	3.2	4,787,696	3.5
	Metal Products, Machinery, Elect. Appl.	10	0.1	120,151	0.1
	Chemicals, Plastics, Paints	4	0.1	1,643,000	1.2
	Flammable Liq., Gases, Petro. Products	27	0.3	315,038	0.2
	Processed Food, Beverage	1	0.0	21,979	0.0
	Textiles, Fibres, Clothing	2	0.0	100	0.0
	Sub Total	366	4.6	14,281,069	10.5
Special/Transportation	Under Construction/Demolition: Vacant	165	2.1	4,326,323	3.2
	Ground Transport Vehicle	2405	30.7	9,688,802	7.1
	Outdoor Property	973	12.4	223,366	0.2
	Special Connecting Thoroughfares	8	0.1	1,296,300	1.0
	Watercraft	14	0.2	71,230	0.1
	Rail Transport Vehicle and Equipment	17	0.2	43,255	0.0
	Special Vehicles	342	4.4	5,907,293	4.3
	Aircraft	3	0.0	7,040,001	5.2
	Sub Total	3927	50.1	28,596,570	21.0

(CONTINUED)

Fires by Major Property Classifications - 1990 (cont'd)

Property Classification		No. Of Fires	% Of Total	Losses	% Of Total
Miscellaneous Property	Miscellaneous	31	0.4	118,411	0.1
	Farm Facilities	310	4.0	4,632,943	3.4
	Miscellaneous Outbuildings	191	2.4	896,701	0.7
	Utility	87	1.1	1,154,175	0.8
	Cement, Glass, Pottery Manufacturing	3	[illegible]	51,717	0.0
	Mining, Quarrying	22	0.3	2,234,853	1.6
	Laboratories	2	0.0	26,000	0.0
	Communications	2	0.0	1,150	0.0
	Sub Total	648	8.2	9,115,950	6.7
	Total	7835	100.0	136,175,648	100.0

Commentary: **The greatest number of fires occurred in the 'special' classification category (notably vehicles) accounting for 50% of all fires. Dollar losses from fires were greatest in the residential properties category which accounted for 34.6% of the losses, with one and two family dwellings, apartment/tenement, and the mobile home/trailer categories accounting for 31.9% or $43,321,722 of the total fire loss. The total dollar loss showed a substantial increase of $27,733,397 or a 25.57% greater dollar loss than occurred in 1989. The information on each of the property classifications on this chart would be beneficial to fire prevention personnel to determine where to direct their fire prevention programs to achieve the best return on resources expended.**

Property Losses Related to Area of Origin - 1990

Property Classification	Means of Egress		Assembly Area		Function Area		Storage Area	
	No. Of Fires	Losses	No. Of Fires	Losses	No. Of Fires	Losses	No. Of Fires	Losses
Assembly	14	360,593	14	624,107	81	2,042,194	12	884,505
Institutional	3	1,051	3	2,901	26	65,117	5	10,850
Residential	71	876,534	234	6,061,986	1252	14,583,384	95	4,684,829
Business	4	221	2	15,800	12	724,008	11	184,535
Mercantile	5	162,401	11	761,073	27	1,373,493	18	4,286,507
Manufacturing	0	0	0	0	33	12,724,286	15	1,334,532
Storage	4	7,209	0	0	9	1,185,264	151	3,895,568
Special	9	193,700	9	72,680	22	183,908	21	313,234
Miscellaneous	0	0	1	25	47	2,365,502	93	2,085,615
Total	110	1,601,709	274	7,538,572	1509	35,247,156	421	17,680,175

Property Classification	Service Facilities		Service and Equipment Area		Structural Area		Vehicle Area	
	No. Of Fires	Losses	No. Of Fires	Losses	No. Of Fires	Losses	No. Of Fires	Losses
Assembly	5	67,101	10	72,343	42	436,648	0	0
Institutional	0	0	5	3,672	5	8,906	0	0
Residential	53	417,814	115	2,933,418	332	10,804,234	27	583,315
Business	0	0	9	346,002	11	4,081	0	0
Mercantile	2	8,415	33	1,861,748	31	942,211	4	5,610
Manufacturing	6	131,724	31	1,953,503	25	945,995	1	82,471
Storage	1	10,000	7	1,182,117	107	955,061	27	762,152
Special	0	0	5	176,141	62	2,809,434	2778	22,723,993
Miscellaneous	2	20,100	32	929,706	190	1,370,591	27	254,602
Total	69	655,154	247	9,458,650	805	18,277,161	2864	24,412,143

Property Losses Related to Area of Origin - 1990 (cont'd)

Property Classification	Unknown		Outside Area		Total	
	No. Of Fires	Losses	No. Of Fires	Losses	No. Of Fires	Losses
Assembly	6	591,143	6	1,153	190	5,079,787
Institutional	0	0	1	8,950	48	101,447
Residential	120	5,732,651	38	455,547	2,337	47,133,712
Business	1	100	0	0	50	1,274,747
Mercantile	8	644,350	6	33,805	145	10,079,613
Manufacturing	11	3,243,342	2	96,900	124	20,512,753
Storage	9	1,904,757	51	4,378,941	366	14,281,069
Special	34	557,985	987	1,565,495	3,927	28,596,570
Miscellaneous	49	1,105,238	207	984,526	648	9,115,950
Total	238	13,779,611	1,298	7,525,317	7,835	136,175,648

Commentary: Of all property classes, the most frequent known areas of fire origin were vehicle area (36.5%), function area (19.3%) and outside area (16.5%). For all types of occupancies, where the area of origin was determined, fires starting in storage areas caused an average of $41,995 loss. The next highest average loss, $38,294, occurred when fires started in service and equipment areas. The single highest losses occurred in the function areas of manufacturing occupancies where 33 fires accounted for losses of $12,724,286 for an average loss of $385,584 per fire. The next highest loss was in the storage areas of mercantile property where 18 fires resulted in a loss of $4,286,507 for an average loss of $238,140 per fire.

Property Losses Related to Act or Omission - 1990

Property Classification	Incendiary Fires		Misuse of Source		Misuse of Material		Mechanical, Electrical Failure	
	No. Of Fires	Losses	No. Of Fires	Losses	No. Of Fires	Losses	No. Of Fires	Losses
Assembly	66	3,078,870	26	201,118	26	492,508	28	339,441
Institutional	13	42,002	9	10,764	1	1,000	10	22,468
Residential	230	5,281,441	421	7,173,950	426	4,114,613	445	11,833,479
Business	11	608,494	16	43,797	2	1,500	13	442,270
Mercantile	35	2,494,504	18	379,147	15	1,324,712	39	2,514,013
Manufacturing	6	1,841,912	21	1,509,867	13	283,912	37	5,309,269
Storage	95	1,504,976	65	1,905,489	37	6,100,362	74	1,352,111
Special	638	3,062,162	543	2,783,780	101	810,993	1595	6,643,767
Miscellaneous	87	705,991	133	787,485	26	239,519	145	3,161,760
Total	1181	18,620,352	1252	14,795,397	647	13,369,119	2386	31,618,578

Property Classification	Design Deficiency		Misuse of Equipment		Human Failing		Vehicle Accident	
	No. Of Fires	Losses	No. Of Fires	Losses	No. Of Fires	Losses	No. Of Fires	Losses
Assembly	4	7,800	31	246,921	0	0	0	0
Institutional	2	5,300	8	18,662	2	200	0	0
Residential	76	2,160,964	477	4,198,838	8	87,460	0	0
Business	0	0	3	3,801	0	0	0	0
Mercantile	5	138,000	13	456,761	1	5,000	1	200
Manufacturing	4	25,500	10	75,751	1	15,000	0	0
Storage	8	193,922	17	184,923	3	12,001	1	250,000
Special	36	513,114	110	563,457	6	28,698	74	8,073,597
Miscellaneous	19	334,100	22	358,153	4	45,840	3	11,000
Total	154	3,378,700	691	6,107,267	25	194,199	79	8,334,797

Property Losses Related to Act or Omission - 1990 (cont'd)

Property Classification	Unknown		Miscellaneous		Total	
	No. Of Fires	Losses	No. Of Fires	Losses	No. Of Fires	Losses
Assembly	7	693,735	2	19,394	190	5,079,787
Institutional	3	1,051	0	0	48	101,447
Residential	226	11,880,256	28	402,711	2,337	47,133,712
Business	5	174,885	0	0	50	1,274,747
Mercantile	16	2,467,176	2	300,100	145	10,079,613
Manufacturing	24	11,172,172	8	279,370	124	20,512,753
Storage	52	2,703,807	14	73,478	366	14,281,069
Special	714	5,072,712	110	1,044,290	3,927	28,596,570
Miscellaneous	151	2,729,209	58	742,893	648	9,115,950
Total	1,198	36,895,003	222	2,862,236	7,835	136,175,648

Commentary: **Mechanical and electrical failures caused 30.4% of all fires which resulted in 23.2% of the dollar losses. Misuse of the source of ignition caused 15.9% of all fires and 10.8% of the dollar losses. There were 1198 (15.3%) fires where the act or omission was unknown. These fires resulted in dollar losses of 36,895,003 or 27% of the total. The average loss of an incendiary fire was $15,766. Incendiary fires, which accounted for 15.1% of all fires, showed an increase of 23.5% in 1990 compared to 1989. Dollar losses for these fires, however, were down by 8.9%.**

Property Losses Related to Source of Ignition - 1990

Property Classification	Cooking Equipment		Heating Equipment		Appliances and Equipment		Electrical Distribution Equipment	
	No. Of Fires	Losses	No. Of Fires	Losses	No. Of Fires	Losses	No. Of Fires	Losses
Assembly	46	745,513	19	261,290	12	18,415	8	68,202
Institutional	5	17,212	1	400	8	17,872	1	200
Residential	707	7,992,052	276	5,580,651	178	1,958,683	144	4,527,325
Business	3	2,020	6	340,501	3	6,500	3	95,100
Mercantile	4	163,872	22	580,839	10	668,743	19	1,498,677
Manufacturing	2	1,400	11	2,987,640	3	83,169	10	312,945
Storage	5	9,386	30	1,660,902	7	125,672	46	1,126,278
Special	61	32,993	43	631,487	32	72,982	831	3,364,058
Miscellaneous	2	1,318	33	1,171,703	4	47,120	63	482,410
Total	835	8,965,766	441	13,215,413	257	2,999,156	1125	11,475,195

Property Classification	Other Electrical Equipment		Smoker's Material and "Open" Flames		Exposure		Miscellaneous	
	No. Of Fires	Losses	No. Of Fires	Losses	No. Of Fires	Losses	No. Of Fires	Losses
Assembly	4	5,800	67	2,281,716	4	7,119	1	2,000
Institutional	4	10,995	24	24,451	0	0	0	0
Residential	50	700,847	605	9,680,221	111	1,797,031	29	507,215
Business	2	650	21	252,843	3	1,300	0	0
Mercantile	9	684,449	36	683,342	14	270,453	8	686,443
Manufacturing	7	1,513,909	18	1,650,743	13	270,756	30	924,414
Storage	9	102,554	76	806,560	88	531,323	20	5,711,035
Special	18	116,501	828	3,728,588	326	1,335,955	772	11,202,002
Miscellaneous	26	369,617	99	1,198,213	232	1,328,446	45	729,285
Total	129	3,505,322	1774	20,306,677	791	5,542,383	905	19,762,394

Property Losses
Related to Source of Ignition - 1990 (cont'd)

Property Classification	Unknown		No Igniting Object		Total	
	No. Of Fires	Losses	No. Of Fires	Losses	No. Of Fires	Losses
Assembly	28	1,639,732	1	50,000	190	5,079,787
Institutional	5	30,317	0	0	48	101,447
Residential	231	14,209,580	6	180,107	2,337	47,133,712
Business	9	575,833	0	0	50	1,274,747
Mercantile	22	4,542,795	1	300,000	145	10,079,613
Manufacturing	26	12,737,039	4	30,738	124	20,512,753
Storage	78	4,165,339	7	42,020	366	14,281,069
Special	1,005	7,914,611	11	197,393	3,927	28,596,570
Miscellaneous	126	3,410,249	18	377,589	648	9,115,950
Total	1,530	49,225,495	48	1,177,847	7,835	136,175,648

Commentary: Smoker's material and "open" flames were the sources of ignition for 22.6% of the fires and 9.7% of the losses. Where a source of ignition was identified, heating equipment caused the highest average loss of $29,966 and also accounted for the highest average loss of $271,603 in manufacturing properties.

Property Losses Related to Fuel or Energy - 1990

Property Classification	Coal or Wood, etc.		Natural Gas or Other Fuel Gas		Fuel Oil		Gasoline	
	No. Of Fires	Losses	No. Of Fires	Losses	No. Of Fires	Losses	No. Of Fires	Losses
Assembly	5	9,600	1	2,500	54	456,176	0	0
Institutional	0	0	0	0	9	17,484	0	0
Residential	159	3,309,833	22	226,977	211	5,345,506	12	457,903
Business	0	0	0	0	9	342,002	0	0
Mercantile	2	100,000	2	23,500	22	429,351	3	16,424
Manufacturing	7	94,871	0	0	18	5,764,812	2	62,000
Storage	11	77,090	5	13,650	32	569,828	3	21,700
Special	21	8,344	59	1,149,488	152	2,221,073	619	2,304,750
Miscellaneous	7	43,016	8	372,132	33	878,069	19	189,676
Total	212	3,642,754	97	1,788,247	540	16,024,301	658	3,052,453

Property Classification	Smoker's Material		Electricity		Lightning		Exposure	
	No. Of Fires	Losses	No. Of Fires	Losses	No. Of Fires	Losses	No. Of Fires	Losses
Assembly	50	2,085,716	39	615,361	1	50,000	5	57,119
Institutional	21	24,439	12	29,206	0	0	0	0
Residential	506	8,048,271	974	12,442,921	5	176,734	110	1,790,196
Business	14	235,441	12	104,370	0	0	3	1,300
Mercantile	27	509,982	44	3,657,459	1	300,000	14	270,453
Manufacturing	6	330,822	28	748,324	1	1,000	13	270,756
Storage	61	336,421	70	3,879,773	4	38,869	88	531,323
Special	727	1,663,303	895	3,907,434	2	5,500	324	1,323,196
Miscellaneous	71	226,527	100	892,871	17	126,089	230	1,324,446
Total	1483	13,460,922	2174	26,277,719	31	698,192	787	5,568,789

Property Losses Related to Fuel or Energy - 1990 (cont'd)

Property Classification	Unknown		Unclassified		Total	
	No. Of Fires	Losses	No. Of Fires	Losses	No. Of Fires	Losses
Assembly	32	1,800,765	3	2,550	190	5,079,787
Institutional	5	30,317	1	1	48	101,447
Residential	254	14,088,762	84	1,246,609	2,337	47,133,712
Business	11	588,834	1	2,800	50	1,274,747
Mercantile	26	4,566,575	4	205,869	145	10,[illegible]9,613
Manufacturing	29	12,675,029	20	565,139	124	20,512,753
Storage	79	4,223,889	13	4,588,526	366	14,281,069
Special	1,016	8,038,929	112	7,974,553	3,927	28,596,570
Miscellaneous	137	4,067,047	26	996,077	648	9,115,950
Total	1,589	50,080,147	264	15,582,124	7,835	136,175,648

Commentary: **Where the fuel or energy was identified, electricity was the most common fuel resulting in 27.7% of the fires. Smoker's material ranked second in fueling 18.0% of fires. Both residential and special property classes had high incidence of fires related to electricity and smoker's material.**

Property Losses
Related to Material First Ignited - 1990

Property Classification	Structural Components		Furniture, Furnishings		Clothing, Textiles		Wood, Paper Products	
	No. Of Fires	Losses	No. Of Fires	Losses	No. Of Fires	Losses	No. Of Fires	Losses
Assembly	24	399,434	8	257,807	8	19,038	29	1,429,882
Institutional	4	8,205	8	3,502	7	44,200	8	704
Residential	314	7,273,850	362	6,393,462	124	1,697,276	155	2,531,434
Business	8	225,802	3	90,250	6	45,210	7	1,341
Mercantile	26	1,583,644	2	899,489	8	101,657	21	356,360
Manufacturing	20	359,456	0	0	2	250,300	21	612,315
Storage	93	828,866	12	82,289	7	33,404	38	5,653,298
Special	85	2,446,567	96	193,955	52	133,704	227	1,954,172
Miscellaneous	179	1,360,712	4	2,781	2	80	55	121,485
Total	753	14,486,536	495	7,923,535	216	2,324,869	561	12,660,991

Prcperty Classification	Flammable & Combustible Liquids		Flammable Gases		Chemicals		Agricultural Products	
	No. Of Fires	Losses	No. Of Fires	Losses	No. Of Fires	Losses	No. Of Fires	Losses
Assembly	49	956,548	11	14,071	5	3,596	6	12,601
Institutional	2	13,611	1	1	0	0	1	100
Residential	551	5,074,021	66	3,585,192	61	387,285	67	201,403
Business	4	209,300	1	115,000	0	0	2	2,000
Mercantile	25	1,234,038	4	105,300	4	4,275	4	59,055
Manufacturing	24	3,102,080	8	1,893,842	4	33,000	9	602,892
Storage	62	1,968,576	17	269,810	7	42,545	9	175,141
Special	876	4,397,997	106	436,433	70	220,314	287	1,404,755
Miscellaneous	39	1,392,804	16	1,142,547	10	206,550	152	1,514,469
Total	1632	18,348,975	230	7,562,196	161	897,565	537	3,972,416

Property Losses
Related to Material First Ignited - 1990 (cont'd)

Property Classification	Unknown		Miscellaneous		Total	
	No. Of Fires	Losses	No. Of Fires	Losses	No. Of Fires	Losses
Assembly	11	1,581,591	35	283,270	190	5,079,787
Institutional	4	11,601	10	17,651	48	101,447
Residential	302	14,525,277	318	4,973,859	2,337	47,133,712
Business	3	542,749	16	43,095	50	1,274,747
Mercantile	21	4,716,415	29	836,880	145	10,079,613
Manufacturing	26	12,749,099	10	909,769	124	20,512,753
Storage	68	4,007,806	45	1,151,990	366	14,281,069
Special	974	14,561,394	1,121	2,304,809	3,927	28,596,570
Miscellaneous	116	2,490,354	71	547,567	648	9,115,950
Total	1,525	55,186,286	1,655	11,068,890	7,835	136,175,648

Commentary: **When identified, the materials most commonly first ignited were flammable and combustible liquids (20.8%). These fires resulted in 13.5% of the losses.**

Property Losses Related to Initial Detection - 1990

Property Classification	Smoke Alarm/ Detector Device		Heat Alarm/ Detector Device		Automatic Systems		Visual Sighting	
	No. Of Fires	Losses	No. Of Fires	Losses	No. Of Fires	Losses	No. Of Fires	Losses
Assembly	10	912,636	1	2,000	3	400	176	4,164,751
Institutional	17	38,298	3	700	0	0	28	62,449
Residential	273	5,314,417	6	32,687	8	46,011	2,048	41,714,897
Business	3	1,001	0	0	3	14,050	44	1,259,696
Mercantile	1	1	0	0	6	363,000	134	9,643,487
Manufacturing	0	0	3	998,601	5	614,700	115	18,871,952
Storage	0	0	0	0	2	2,200	364	14,278,869
Special	1	1,500	0	0	1	2,200	3,921	28,571,977
Miscellaneous	0	0	1	400	0	0	647	9,115,550
Total	305	6,267,853	14	1,034,388	28	1,042,561	7,477	127,683,628

Property Classification	Unclassified or Unknown		Total	
	No. Of Fires	Losses	No. Of Fires	Losses
Assembly	0	0	190	5,079,787
Institutional	0	0	48	101,447
Residential	2	25,700	2,337	47,133,712
Business	0	0	50	1,274,747
Mercantile	4	73,125	145	10,079,613
Manufacturing	1	27,500	124	20,512,753
Storage	0	0	366	14,281,069
Special	4	20,893	3,927	28,596,570
Miscellaneous	0	0	648	9,115,950
Total	11	147,218	7,835	136,175,648

Commentary: Visual sighting accounted for 95.4% of all means of initial detection of fires. The second, though much less common (3.5%), form of initial detection involved smoke alarms/detectors, primarily in residential properties.

Fires by Method of Fire Control and Extinguishment - 1990

Method of Fire Control and Extinguishment		No. Of Fires	% Of Total	Losses	% Of Total
Hand Fire Extinguisher	Water pump tank	250	3.2	1,142,636	0.8
	Multi-purpose dry chemical	54	0.7	107,494	0.1
	Dry chemical	436	5.6	1,138,021	0.8
	Water pressurized	50	0.6	824,430	0.6
	Foam	15	0.2	114,902	0.1
	CO2	37	0.5	77,478	0.1
	Hand fire extinguisher - unclass.	45	0.6	82,937	0.1
	Water soda-acid	2	0.0	2,601	0.0
	Vapourizing liquid/Halon	5	0.1	22,900	0.0
	Sub Total	894	11.4	3,513,399	2.6
Standpipe System	Sm. hse/38 mm nom. comb. noz.	149	1.9	1,351,518	1.0
	Sm. hse/38 mm nom. strght stm/noz.	22	0.3	540,969	0.4
	Lge. hse/65 mm nom. comb. noz.	5	0.1	124,644	0.1
	Cont. flow/<38 mm nom. comb. noz.	2	0.0	15,050	0.0
	Lge. hse/65 mm nom. strght stm/noz	1	0.0	25,000	0.0
	Sub Total	179	2.3	2,057,181	1.5
"Makeshift" Fire Fighting Aid	Water bucket	119	1.5	220,467	0.2
	Baking soda	30	0.4	52,699	0.0
	Smothered by covering	109	1.4	160,875	0.1
	Small water container	125	1.6	255,650	0.2
	'Makeshift' fire fighting aid - unclassified	60	0.8	85,245	0.1
	Snow	45	0.6	103,556	0.1
	Garden hose	142	1.8	291,876	0.2
	Dry chemical and scoop	7	0.1	12,870	0.0
	Sand bucket	5	0.1	2,275	0.0
	Sub Total	642	8.2	1,185,513	0.9
Fire Department - Water	38 mm hose, 1 hoseline	1755	22.4	8,331,067	6.1
	38 mm hose, 2 or more	791	10.1	22,794,789	16.7
	Booster hose, 25 mm or less	180	2.3	442,021	0.3
	Comb. of 38 mm, 65 mm, 77 mm or larger	458	5.8	40,059,168	29.4
	65 mm hose, 2 or more	77	1.0	4,650,616	3.4
	Fire Department - water - unclass.	77	1.0	548,220	0.4

(CONTINUED)

Fires by Method of Fire Control and Extinguishment - 1990 (cont'd)

Method of Fire Control and Extinguishment		No. Of Fires	% Of Total	Losses	% Of Total
Fire Department - Water (cont'd)	77 mm or larger hose, 1 or more	36	0.5	1,201,525	0.9
	65 mm hose, 1 hoseline	18	0.2	111,539	0.1
	Portable water deluge set	7	0.1	7,038,528	5.2
	Sub Total	3399	43.4	85,177,473	62.5
Fire Department - Other Than Water	Crash-fire foam vehicle, using handlines	5	0.1	76,000	0.1
	Pumper, foam hand. only, via eductor	29	0.4	617,987	0.5
	Fire dept. - other than water - unclassified	12	0.2	758,354	0.6
	Crash-fire foam vehicle, using monitor	1	0.0	7,000,000	5.1
	Vehicle, dry chem., under 450kg	2	0.0	35,423	0.0
	Vehicle, comb., foam-dry chemical	1	0.0	22,700	0.0
	Sub Total	50	0.6	8,510,464	6.2
Sprinkler System	Wet pipe system, alarm connected to fire department	14	0.2	72,814	0.1
	Wet pipe system, local alarm only	4	0.1	2,750	0.0
	Sprinkler System - unclassified	3	0.0	25,100	0.0
	Pre-action sys., local alarm only	1	0.0	50	0.0
	Dry pipe system, alarm connected to fire department	2	0.0	15,000	0.0
	Sub Total	24	0.3	115,714	0.1
Fixed System Other Than Sprinklers	Halon system	1	0.0	200	0.0
	Dry chemical system	9	0.1	18,213	0.0
	Water spray system	1	0.0	248,600	0.2
	Sub Total	11	0.1	267,013	0.2
Burned Out	Burned out before fire department arrival	259	3.3	1,422,262	1.0
	Burned out - unclassified	126	1.6	925,532	0.7
	Incapable of controlling fire	13	0.2	677,689	0.5
	Sub Total	398	5.1	3,025,483	2.2
Miscellaneous	Miscellaneous - unclassified	77	1.0	2,618,716	1.9
	Misc.- cannot be determined	2161	27.6	29,704,692	21.8
	Sub Total	2238	28.6	32,323,408	23.7
	Total	7835	100.0	136,175,648	100.0

Commentary: **Where identified, 11.4% of the fires were extinguished by hand fire extinguishers and 8.2% by makeshift firefighting aids.**

Home Fire Losses in Alberta - 1990

Type	Incidents	Deaths	Injuries	$ Loss
1 & 2 Family Dwellings	1,422	17	128	28,047,973
Mobile Homes	187	4	21	4,886,222
Apartments, Tenements	507	12	104	9,606,016
Total	2,116	33	253	42,540,211

Commentary: 27.0% of all fires occurred in homes. These fires accounted for 31.2% of all dollar losses, 68.8% of all deaths (fire deaths + deaths involving fire), and 57.5% of all fire injuries. Of the 33 deaths in homes, 31 (93.9%) were fire deaths.

Home Fires by Major Areas of Fire Origin - 1990

Area of Origin	% Of Incidents	% Of Deaths	% Of Injuries	% Of $ Loss
Kitchen	33	27	24	15
Structural Area	14	0	13	25
Living Room	13	3	16	14
Bedroom	12	15	20	11
Laundry Area	11	33	19	14
Heating Equipment Room	6	3	2	2
Chimney	4	3	4	6
Unknown	4	15	2	13
Other	2	0	0	1
Total	100	100	100	100

Commentary: Most home fires (33%) started in kitchens. These fires accounted for the second highest percentage of deaths (24%), the highest percentage of injuries (24%) and 15% of the dollar losses. Most fatal home fires (33%) started in laundry areas, while fires in the structural area of the homes had the highest percentage (25%) of dollar losses ($10,635,053).

Home Fires by Major Areas of Fire Origin and Sources of Ignition - 1990

Area of Origin	Source of Ignition	Percent of all Sources of Ignition within each Area				
		Incidents	Deaths	Injuries	$ Loss	
Kitchen	Stove or range, top burner area	74	56	83	61	*
	All other sources	26	44	17	39	
Living Room	Smoker's material**	37	64	69	46	
	Match, lighter not used with smoking	17	9	8	11	
	Fireplace	13	0	4	13	
	All other sources	33	27	19	30	
Structural Area	Exposure fire	27	0	0	16	
	Electrical: wiring, distribution	17	0	16	16	
	Fireplace	8	0	25	7	
	All other sources	48	0	59	61	
Bedroom	Smoker's material	26	40	37	15	
	Match, lighter not used with smoker's material	29	20	27	26	
	Electric light bulb/lamp	6	0	0	2	
	All other sources	39	40	35	57	
Laundry Area	Clothes dryer	57	0	40	31	
	All other sources	43	100	60	69	
Heating Equip. Area	Central heating unit	47	0	40	41	
	Service water heater	15	0	20	16	
	All other sources	38	100	40	43	
Chimney	Fireplace	63	0	0	47	
	Heating Equipment	26	0	100	51	
	All other sources	7	0	0	3	

*** Interpreted as follows: Stove or range, top burner area was the source of ignition in 74% of incidents, 56% of deaths, 83% of injuries and 61% of $ losses in fires which originated in kitchens. The remaining 26% of incidents, 44% of deaths, 17% of injuries and 34% of $ losses were kitchen fires ignited by other sources of ignition.**

**** Smoker's material: Includes cigarettes, pipe, cigar and/or matches, lighter used in conjunction with smoking.**

Home Fires by Major Ignition Scenarios - 1990

Area and Source of Igniton	Material First Ignited	Act or Omission	Percent of All Fire Incidents, Casualties and $ Losses in Area and Source of Ignition			
			Incidents	Deaths	Injuries	$ Loss
KITCHEN:						
Stove or range top burner area:			*			
Fire in pan	Cooking oil	Overheated oil	49	0	53	39
		All other	27	50	10	32
	All other	All other	24	50	37	29
Fire in deepfat fryer/pot	Cooking oil	Overheated oil	74	67	81	75
		All other	18	33	12	21
	All other	All other	8	0	7	4
STRUCTURAL AREAS:						
Exposure fire from detached structure	Exterior wall	Arson	18	0	0	21
		All other	52	0	0	50
	All other	All other	30	100	100	29
Electrical: wiring/dist. equip.	Insulation	Electric short circuit	45	0	80	43
		All other	14	0	0	6
	All other	All other	41	100	20	51
Fireplace	Wall structure	Installation deficiency	32	0	50	19
		All other	12	0	50	46
	All other	All other	56	100	0	35
LIVING ROOM:						
Smoker's material	Upholstered furniture	Smoker's material **	67	86	39	61
		Asleep/alcohol or drugs	20	0	18	9
	All other	All other	13	14	43	30
Match, lighter not used with smoking	Upholstered furniture, etc.	Child playing with	47	100	50	68
		All other	14	0	0	13
	All other	All other	39	0	50	19
Fireplace	Carpet, rug	Human failing	32	0	0	1
		All other	9	0	50	0
	All other	All other	59	100	50	99
BEDROOM:						
Smoker's material	Mattress, bedding	Smoker's material	54	100	68	57
		All other	18	0	21	3
	All other	All other	28	0	11	40
Match, lighter not used with smoking	Mattress, bedding	Child playing with	40	0	29	37
		All other	7	0	7	4
	All other	All other	53	100	64	59
Light Bulb	Mattress, bedding	Human failing	40	0	0	13
		All other	33	0	0	66
	All other	All other	27	100	100	21

Home Fires by Major Ignition Scenarios - 1990 (cont'd)

Area and Source of Igniton	Material First Ignited	Act or Omission	Percent of all Fire Incidents, Casualties and $ Losses in Area and Source of Ignition			
			Incident	Deaths	Injuries	$ Loss
LAUNDRY AREA:						
Clothes dryer	Fibre/lint	Ignorance of hazard	32	0	50	8
		All other	7	0	0	2
	Clothing, fabric	Mechanical, electrical failure, malfunction	16	0	0	44
		All other	21	0	0	26
	Electric Insul.	Elect. short circuit	20	0	50	18
	All other	All other	4	100	0	2
HEATING EQUIPMENT ROOM:						
Central heating unit	Flammable/combustible liq./gas	Mechanical, electrical failure, malfunction	21	0	25	14
		Ignorance of hazard	8	0	0	12
		All other	10	0	50	15
	All other	All other	61	0	25	59
Service water heater	Flammable/combustible liq./gas	Ignorance of hazard	28	0	50	32
		All other	21	0	50	5
	All other	All other	51	100	0	63
CHIMNEY:						
Fireplace	Creosote	Ignorance of hazard	66	0	0	69
		All other	16	0	0	0
	All other	All other	18	100	100	31
Heating equipment space heater	Creosote	Ignorance of hazard	57	0	0	38
		All other	14	0	100	51
	All other	All other	29	100	0	11
OTHER:						
Smoker's material	Upholstered furniture	Smoker's material	16	100	25	22
	All other	Smoker's material	84	0	75	78
Match, lighter not used with smoking	All other	Arson/set fire	68	0	46	73
		Child playing with	32	0	56	27
Barbeque	Propane/Butane, LPG's	Mechanical part failure leak or break	55	0	67	97
		All other	20	0	33	2
	All other	All other	25	0	0	1

*** Interpreted as follows:** **In kitchen fires which started in pans heated on stove or range top burner areas, 49% resulted from ignition of cooking oil due to overheating. In a further 27% of fires in which cooking oil ignited first other acts or ommissions were involved. The remaining 24% of pan fires on kitchen stoves or range tops involved ignition of other materials and acts or ommissions. The major ignition scenarios would be useful in the design and presentation of public fire education and fire prevention programs to reduce Alberta home fire losses.**

**** Misuse of smoker's material.**

Home Fires by Smoke Alarm Operation - 1990

	Fires	% Of Total	Deaths	% Of Total	Injuries	% Of Total	$ LOSS	% Of Total
Smoke alarm installation								
- Not installed	984	47	20	61	73	29	20,181,920	47.4
- Installed	1132	53	13	39	180	71	22,358,291	52.6
Total	2116	100	33	100	253	100	42,540,211	100.0
Activation of installed alarms								
- Activated	587	52	4	31	116	64	13,461,351	60.2
- Not activated	413	36	3	23	40	22	4,113,403	18.4
- Unknown	132	12	6	46	24	13	4,783,537	21.4
Total	1132	100	13	100	180	100	22,358,291	100.0
Alarm assistance to occupants								
- Assisted occupants to evacuate	310	53	4	100	84	72	9,561,936	71.0
- Did not assist occupants	277	47	0	0	32	28	3,899,415	29.0
Total	587	100	4	100	116	100	13,461,351	100.0
Alarm did not assist occupant evacuation - reasons								
- Alarm inaudible	4	1	0	0	1	3	33,110	0.8
- Unable to respond	1	0	0	0	0	0	18,412	0.5
- Under the influence of alcohol/drugs	5	2	0	0	3	9	13,227	0.3
- Unsuitable location	2	1	0	0	0	0	160,227	4.1
- Unknown	16	6	0	0	5	16	127,148	3.3
- Unnecessary to evacuate	167	60	0	0	11	34	1,153,000	23.8
- Other	82	30	0	0	12	38	2,394,291	61.4
Total	277	100	0	0	32	100	3,899,415	100.0
Alarms not activated - reasons								
- Unsuitable location	8	2	1	33	0	0	91,070	2.2
- No battery	84	20	0	0	16	40	891,169	21.7
- Dead battery	31	8	0	0	5	13	480,894	11.7
-Electricity off	24	6	1	33	4	10	322,241	7.8
- Electricity not connected	23	6	0	0	1	3	107,112	2.6
- Mechanical failure	9	2	0	0	4	10	102,222	2.5
- Not enough smoke	163	40	0	0	6	15	575,050	14.0
- Unknown	42	10	0	0	3	8	972,951	23.6
- Other	29	7	1	33	1	3	570,694	13.9
Total	413	100	3	100	40	100	4,113,403	100.0

Commentary: **Eleven hundred and thirty-two (53%) of the homes that had fires in 1990 were equipped with smoke alarms with 13 deaths being recorded. The remaining 984 homes (47%) were without smoke alarms and recorded a total of 20 deaths. Over the past three years the homes with smoke alarms had approximately one-half (49.2%) less deaths than homes without smoke alarms. Smoke alarms were not installed in 47% of homes that had fires in 1990. Alarms did not activate in 36% of the fires in homes with alarms. No power source and not enough smoke accounted for 40% each for lack of alarm activation. Occupants were alerted in 81% of home fires where smoke alarms activated. Over the past three years, homes without smoke alarms had approximately twice the number of deaths per fire than homes with smoke alarms.**

MUNICIPAL FIRE LOSS STATISTICS
FOR THE YEAR ENDING DECEMBER 31, 1990
AND FOR THE 10- YEAR PERIOD

Municipality		Population	Year Ending December 31, 1990				10 Yr. Total		10 Yr. Average	
			Fire Count	$ Loss	Fire Rate	Per Capita $ Loss	Fire Count	$ Loss	Fire Rate	Per Capita $ Loss
County 1	Grande Prairie Cty #1	12,042	111	2,126,129	9.2	176.56	1025	13,716,948	8.5	113.9
	Beaverlodge	1,808	8	1,412,770	4.4	781.40	44	2,060,157	2.4	113.9
	Hythe	688	2	3,156	2.9	4.59	24	518,349	3.5	75.3
	Sexsmith	1,256	5	20,750	4.0	16.52	45	692,136	3.6	55.1
	Wembley	1,264	3	11,437	2.4	9.05	34	303,299	2.7	24.0
	Total	17,058	129	3,574,242	7.6	209.53	1172	17,290,889	6.9	101.36
County 2	Vulcan Cty #2	3,656	18	205,443	4.9	56.19	162	3,247,278	4.4	88.8
	Vulcan	1,422	2	117,001	1.4	82.28	33	246,570	2.3	17.3
	Champion	358	3	2,047	8.4	5.72	12	59,248	3.4	16.5
	Arrowwood	140	.	.	.	.	1	82,623	0.7	59.0
	Carmangay	259	.	.	.	.	10	40,625	3.9	15.7
	Lomond	177	.	.	.	.	5	87,091	2.8	49.2
	Milo	114	.	.	.	.	4	5,283	3.5	4.6
	Total	6,126	23	324,491	3.8	53.97	227	3,768,718	3.7	61.52
County 3	Ponoka Cty #3	7,739	40	1,009,000	5.2	130.38	505	5,281,104	6.5	68.2
	Ponoka	5,473	15	184,641	2.7	33.74	132	994,340	2.4	18.2
	Rimbey	1,748	9	75,263	5.1	43.06	64	1,016,222	3.7	58.1
	Parkland Beach S.V.	48	1	65,000	20.8	1354.17	2	65,450	4.2	136.4
	Total	15,008	65	1,333,904	3.8	53.97	703	7,357,116	4.7	49.02
County 4	Newell Cty #4	6,143	42	552,508	6.8	89.94	399	11,645,068	6.5	189.6
	Brooks	9,464	22	317,063	2.3	33.50	206	5,035,968	2.2	53.2
	Bassano	1,186	1	57,500	0.8	48.48	28	166,726	2.4	14.1
	Duchess	430	.	.	.	.	7	88,801	1.6	20.7
	Rosemary	321	.	.	.	.	1	2,694	0.3	0.8
	Tilley	362	.	.	.	.	8	238,235	2.2	65.8
	Total	17,906	65	927,071	3.6	51.77	649	17,177,492	3.6	95.93
County 5	Warner Cty #5	3,579	40	496,175	11.2	138.64	193	2,417,977	5.4	67.6
	Warner	490	2	42,908	4.1	87.57	9	64,849	1.8	13.2
	Milk River	929	1	651,000	1.1	700.75	14	823,365	1.5	88.6
	Raymond	2,957	4	74,289	1.4	25.12	59	641,936	2.0	21.7
	Coutts	359	.	.	.	.	12	588,445	3.3	163.9

MUNICIPAL FIRE LOSS STATISTICS
FOR THE YEAR ENDING DECEMBER 31, 1989
AND FOR THE 10- YEAR PERIOD.....(CONTINUED).....

Municipality		Population	Year Ending December 31, 1990				10 Yr. Total		10 Yr. Average	
			Fire Count	$ Loss	Fire Rate	Per Capita $ Loss	Fire Count	$ Loss	Fire Rate	Per Capita $ Loss
County 5	Stirling	796	.	.	.	.	20	224,118	2.5	28.2
	Total	9,110	47	1,264,372	5.2	138.80	307	4,760,690	3.4	52.26
County 6	Stettler Cty #6	5,179	21	205,672	4.1	39.71	307	3,767,301	5.9	72.7
	Stettler	5,147	7	222,145	1.4	43.16	148	6,591,410	2.9	128.1
	Big Valley	295	4	2,805	13.6	9.51	16	135,368	5.4	45.9
	Botha	180	.	.	.	.	3	2,388	1.7	1.3
	Donalda	227	.	.	.	.	6	77,229	2.6	34.0
	Gadsby	35	.	.	.	.	5	45,153	14.3	129.0
	Rochon Sands S.V.	41	.	.	.	.	2	12,576	4.9	30.7
	Total	11,104	32	430,622	2.9	38.78	487	10,631,425	4.4	95.74
County 7	Thorhild Cty #7	3,094	33	751,665	10.7	242.94	214	3,777,749	6.9	122.1
	Thorhild	481	2	325,580	4.2	676.88	20	367,541	4.2	76.4
	Radway	200	1	3,000	5.0	15.00	3	8,600	1.5	4.3
	Total	3,775	36	1,080,245	9.5	286.15	237	4,153,890	6.3	110.04
County 8	Forty Mile Cty #8	3,335	28	114,542	8.4	34.35	212	2,361,278	6.4	70.8
	Bow Island	1,566	6	1,637,888	3.8	1045.91	61	3,085,073	3.9	197.0
	Foremost	595	.	.	.	.	15	93,355	2.5	15.7
	Burdett	278	.	.	.	.	5	178,450	1.8	64.2
	Total	5,774	34	1,752,430	5.9	303.50	293	5,718,156	5.1	99.03
County 9	Beaver Cty #9	5,400	24	249,051	4.4	46.12	345	3,211,475	6.4	59.5
	Ryley	500	2	100	4.0	0.20	20	54,183	4.0	10.8
	Tofield	1,542	2	8,455	1.3	5.48	32	437,767	2.1	28.4
	Viking	1,160	4	209,450	3.4	180.56	16	1,595,824	1.4	137.6
	Holden	411	.	.	.	.	7	191,946	1.7	46.7
	Total	9,013	32	467,056	3.6	51.82	420	5,491,195	4.7	60.93
County 10	Wetaskiwin Cty #10	9,521	38	763,134	4.0	80.15	524	6,045,887	5.5	63.5
	Millet	1,703	2	46,396	1.2	27.24	33	186,108	1.9	10.9
	Crystal Springs	35	.	.	.	.	2	21,677	5.7	61.9
	Ma-Me-O Beach S.V.	54	.	.	.	.	17	572,726	31.5	1060.6
	Grandview S.V.	40	.	.	.	.	3	17,567	7.5	43.9
	Argentia Beach S.V.	3	.	.	.	.	3	348,079	100.0	11602.6
	Poplar Bay S.V.	43	.	.	.	.	2	23,200	4.7	54.0

MUNICIPAL FIRE LOSS STATISTICS
FOR THE YEAR ENDING DECEMBER 31, 1989
AND FOR THE 10- YEAR PERIOD.....(CONTINUED).....

Municipality		Population	Year Ending December 31, 1990				10 Yr. Total		10 Yr. Average	
			Fire Count	$ Loss	Fire Rate	Per Capita $ Loss	Fire Count	$ Loss	Fire Rate	Per Capita $ Loss
County 10	Total	11,399	40	809,530	3.5	71.02	584	7,215,244	5.1	63.30
County 11	Barrhead Cty #11	5,728	32	235,204	5.6	41.06	254	9,426,312	4.4	164.6
	Barrhead	4,014	8	60,434	2.0	15.06	82	811,189	2.0	20.2
	Total	9,742	40	295,638	4.1	30.35	336	10,237,501	3.5	105.09
County 12	Athabasca Cty #12	6,094	28	1,411,642	4.6	231.64	262	4,473,504	4.3	73.4
	Athabasca	1,975	7	62,297	3.5	31.54	49	672,765	2.5	34.1
	Boyle	700	.	.	.	.	18	100,015	2.6	14.3
	Island Lake S.V.	126	.	.	.	.	3	29,843	2.4	23.7
	Mewatha Beach S.V.	32	.	.	.	.	1	1	3.1	0.0
	South Baptiste S.V.	68	.	.	.	.	5	149,001	7.4	219.1
	Island Lake South S.V.	59	.	.	.	.	1	83,000	1.7	140.7
	Total	9,054	35	1,473,939	3.9	162.80	339	5,508,129	3.7	60.83
County 13	Smoky Lake Cty #13	2,789	16	120,040	5.7	43.04	217	1,879,772	7.8	67.4
	Smoky Lake	1,045	2	300	1.9	0.29	21	433,776	2.0	41.5
	Warspite	97	1	15,000	10.3	154.64	2	23,500	2.1	24.2
	Vilna	325	.	.	.	.	8	95,690	2.5	29.4
	Waskatenau	276	.	.	.	.	2	9,110	0.7	3.3
	Total	4,532	19	135,340	4.2	29.86	250	2,441,848	5.5	53.88
County 14	Lacombe Cty #14	8,911	48	508,802	5.4	57.10	735	8,069,487	8.2	90.6
	Lacombe	6,471	10	56,864	1.5	8.79	153	2,237,672	2.4	34.6
	Alix	793	1	14,238	1.3	17.95	13	165,199	1.6	20.8
	Bentley	841	1	21,842	1.2	25.97	23	97,004	2.7	11.5
	Blackfalds	1,768	6	303,905	3.4	171.89	41	441,250	2.3	25.0
	Clive	356	1	2,200	2.8	6.18	9	33,584	2.5	9.4
	Eckville	869	2	1,050	2.3	1.21	37	154,904	4.3	17.8
	Gull Lake S.V.	102	2	91,000	19.6	892.16	11	189,091	10.8	185.4
	Mirror	508	1	737	2.0	1.45	12	167,767	2.4	33.0
	Total	20,619	72	1,000,638	3.5	48.53	1034	11,555,958	5.0	56.05
County 16	Wheatland Cty #16	5,409	43	818,770	7.9	151.37	457	6,801,262	8.4	125.7
	Strathmore	3,746	3	1,001	0.8	0.27	92	2,548,175	2.5	68.0
	Gleichen	327	5	243,184	15.3	743.68	14	327,192	4.3	100.1

MUNICIPAL FIRE LOSS STATISTICS
FOR THE YEAR ENDING DECEMBER 31, 1989
AND FOR THE 10- YEAR PERIOD.....(CONTINUED).....

Municipality		Population	Year Ending December 31, 1990				10 Yr. Total		10 Yr. Average	
			Fire Count	$ Loss	Fire Rate	Per Capita $ Loss	Fire Count	$ Loss	Fire Rate	Per Capita $ Loss
County 16	Standard	336	1	50	3.0	0.15	13	97,393	3.9	29.0
	Cluny	94	.	.	.	.	5	14	5.3	0.0
	Hussar	151	.	.	.	.	5	332,476	3.3	220.2
	Rockyford	311	.	.	.	.	8	27,236	2.6	8.8
	Total	10,374	52	1,063,005	5.0	102.47	594	10,133,748	5.7	131.76
County 17	Mountain View Cty #17	8,886	66	2,448,861	7.4	275.59	721	21,788,010	8.1	245.2
	Didsbury	3,197	8	434,314	2.5	135.85	92	1,099,123	2.9	34.4
	Olds	5,233	9	1,523,575	1.7	291.15	127	3,090,359	2.4	59.1
	Sundre	1,840	7	62,071	3.8	33.73	64	1,143,030	3.5	62.1
	Carstairs	1,537	4	9,730	2.6	6.33	42	519,492	2.7	33.8
	Cremona	368	1	13,154	2.7	35.74	16	109,397	4.3	29.7
	Total	21,061	95	4,491,705	4.5	213.27	1062	27,749,411	5.0	131.76
County 18	Paintearth Cty #18	2,439	19	273,276	7.8	112.04	172	2,188,331	7.1	89.7
	Castor	1,030	2	71,712	1.9	69.62	21	410,733	2.0	39.9
	Coronation	1,310	6	41,924	4.6	32.00	49	2,193,900	3.7	167.5
	Halkirk	155	.	.	.	.	17	131,579	11.0	84.9
	Total	4,934	27	386,912	2.3	43.15	259	4,924,543	5.3	99.81
County 19	St. Paul Cty #19	6,595	24	541,847	3.6	82.16	437	5,025,911	6.6	76.2
	St. Paul	5,128	5	16,010	1.0	3.12	179	3,322,501	2.3	64.8
	Elk Point	1,391	1	8,000	0.7	5.75	28	223,336	2.0	16.1
	Total	13,114	30	565,857	2.3	43.15	584	8,571,748	4.5	65.36
County 20	Strathcona Cty #20	19,733	104	3,882,693	5.3	196.76	1288	20,565,497	6.5	104.2
	Sherwood Park	33,820	66	180,156	2.0	5.33	602	2,585,016	1.8	7.6
	Total	53,553	170	4,062,849	3.2	75.87	1890	23,150,513	3.5	43.23
County 21	Two Hills Cty #21	3,086	19	81,162	6.2	26.30	251	1,449,769	8.1	47.0
	Two Hills	1,171	3	192,132	2.6	164.08	24	288,882	2.0	24.7
	Myrnam	383	1	68,000	2.6	177.55	8	72,379	2.1	18.9
	Hairy Hill	75	1	843	13.3	11.24	6	1,047,325	8.0	1396.4
	Derwent	149	.	.	.	.	4	15,319	2.7	10.3
	Willingdon	371	.	.	.	.	8	20,406	2.2	5.5
	Total	5,235	24	342,137	4.6	65.36	301	2,894,080	5.8	55.28

MUNICIPAL FIRE LOSS STATISTICS
FOR THE YEAR ENDING DECEMBER 31, 1989
AND FOR THE 10- YEAR PERIOD.....(CONTINUED).....

Municipality		Population	Year Ending December 31, 1990				10 Yr. Total		10 Yr. Average	
			Fire Count	$ Loss	Fire Rate	Per Capita $ Loss	Fire Count	$ Loss	Fire Rate	Per Capita $ Loss
County 22	Camrose Cty #22	7,475	48	738,305	6.4	98.77	503	5,466,390	6.7	73.1
	Bashaw	829	.	.	.	.	22	74,608	2.7	9.0
	Bawlf	375	.	.	.	.	9	1,564,468	2.4	417.2
	Edberg	129	.	.	.	.	3	72,992	2.3	56.6
	Ferintosh	125	.	.	.	.	2	4,750	1.6	3.8
	Hay Lakes	312	.	.	.	.	8	266,335	2.6	85.4
	New Norway	273	.	.	.	.	12	38,453	4.4	14.1
	Rosalind	214	.	.	.	.	8	74,917	3.7	35.0
	Total	9,732	48	738,305	4.6	65.36	567	7,562,913	5.8	55.28
County 23	Red Deer Cty #23	13,911	69	957,014	5.0	68.80	924	11,710,840	6.6	84.2
	Innisfail	5,745	7	32,240	1.2	5.61	119	1,805,636	2.1	31.4
	Sylvan Lake	3,937	16	311,546	4.1	79.13	108	911,875	2.7	23.2
	Bowden	967	5	39,609	5.2	40.96	29	382,931	3.0	39.6
	Delburne	577	1	700	1.7	1.21	14	176,282	2.4	30.6
	Penhold	1,495	5	1,351	3.3	0.90	45	212,125	3.0	14.2
	Elnora	260	.	.	.	.	4	12,556	1.5	4.8
	Norglewold S.V.	168	.	.	.	.	1	1,500	0.6	0.9
	Total	27,060	103	1,342,460	3.8	49.61	1244	15,213,745	4.6	56.22
County 24	Vermilion Rv. Cty #24	8,112	75	2,412,666	9.2	297.42	579	9,180,229	7.1	113.2
	Kitscoty	622	2	11,000	3.2	17.68	11	55,340	1.8	8.9
	Vermilion	4,364	7	45,677	1.6	10.47	106	1,744,507	2.4	40.0
	Dewberry	210	.	.	.	.	5	905,028	2.4	431.0
	Marwayne	516	.	.	.	.	15	33,642	2.9	6.5
	Paradise Valley	163	.	.	.	.	4	91,630	2.5	56.2
	Total	13,987	84	2,469,343	6.0	176.55	720	12,010,376	5.2	85.87
County 25	Leduc Cty #25	11,278	79	1,208,054	7.0	107.12	718	9,269,967	6.4	82.2
	Calmar	1,194	2	4,309	1.7	3.61	22	630,969	1.8	52.8
	Devon	3,956	12	9,852	3.0	2.49	77	476,565	1.9	12.0
	New Sarepta	355	2	27,000	5.6	76.06	19	332,881	5.4	93.8
	Thorsby	640	1	5,750	1.6	8.98	8	22,719	1.3	3.5
	Beaumont	4,584	5	8,302	1.1	1.81	44	172,323	1.0	3.8

MUNICIPAL FIRE LOSS STATISTICS
FOR THE YEAR ENDING DECEMBER 31, 1989
AND FOR THE 10- YEAR PERIOD.....(CONTINUED).....

Municipality		Population	Year Ending December 31, 1990				10 Yr. Total		10 Yr. Average	
			Fire Count	$ Loss	Fire Rate	Per Capita $ Loss	Fire Count	$ Loss	Fire Rate	Per Capita $ Loss
County 25	Breton	557	.	.	.	.	9	117,879	1.6	21.2
	Warburg	477	.	.	.	.	7	56,611	1.5	11.9
	Itaska Beach S.V.	2	.	.	.	.	11	201,085	550.0	10054.2
	Golden Days S.V.	39	.	.	.	.	6	231,634	15.4	593.9
	Total	23,082	101	1,263,267	4.4	54.73	921	11,512,633	4.0	49.88
County 26	Lethbridge Cty #26	8,266	49	923,270	5.9	111.69	649	7,034,976	7.9	85.1
	Coaldale	5,230	14	133,174	2.7	25.46	114	795,317	2.2	15.2
	Picture Butte	1,552	4	41,135	2.6	26.50	30	351,019	1.9	22.6
	Barons	255	3	6,022	11.8	23.62	8	24,198	3.1	9.5
	Coalhurst	1,289	4	131,001	3.1	101.63	45	397,937	3.5	30.9
	Nobleford	555	.	.	.	.	15	78,437	2.7	14.1
	Total	17,147	74	1,234,602	4.3	72.00	861	8,681,884	5.0	50.63
County 27	Minburn Cty #27	3,894	29	489,037	7.4	125.59	241	3,621,373	6.2	93.0
	Mannville	778	2	6	2.6	0.01	21	204,915	2.7	26.3
	Vegreville	5,276	7	49,482	1.3	9.38	114	1,286,361	2.2	24.4
	Minburn	135	.	.	.	.	5	123,520	3.7	91.5
	Innisfree	219	.	.	.	.	5	17,033	2.3	7.8
	Lavoy	126	.	.	.	.	2	27,461	1.6	21.8
	Total	10,428	38	538,525	3.6	51.64	388	5,280,663	3.7	50.64
County 28	Lac Ste. Anne Cty #28	7,765	32	883,524	4.1	113.78	368	5,901,599	4.7	76.0
	Onoway	647	1	4,518	1.5	6.98	15	62,845	2.3	9.7
	Mayerthorpe	1,414	2	111,000	1.4	78.50	26	778,715	1.8	55.1
	Alberta Beach S.V.	425	2	73,550	4.7	173.06	37	495,790	8.7	116.7
	Sunset Point S.V.	102	.	.	.	.	1	7,383	1.0	7.2
	Sangudo	401	.	.	.	.	10	147,013	2.5	36.7
	Yellowstone S.V.	93	.	.	.	.	3	108,829	3.2	117.0
	Ross Haven S.V.	73	.	.	.	.	4	97,052	5.5	132.9
	Val Quentin S.V.	78	.	.	.	.	3	24,549	3.8	31.5
	Total	10,998	37	1,072,592	3.4	97.53	467	7,623,775	4.3	69.32
County 29	Flagstaff Cty #29	4,406	36	470,832	8.2	106.86	406	3,015,908	9.2	68.5
	Daysland	686	2	67,000	2.9	97.67	20	295,970	2.9	43.1

MUNICIPAL FIRE LOSS STATISTICS
FOR THE YEAR ENDING DECEMBER 31, 1989
AND FOR THE 10- YEAR PERIOD.....(CONTINUED).....

Municipality		Population	Year Ending December 31, 1990				10 Yr. Total		10 Yr. Average	
			Fire Count	$ Loss	Fire Rate	Per Capita $ Loss	Fire Count	$ Loss	Fire Rate	Per Capita $ Loss
County 29	Hardisty	642	2	1,916	3.1	2.98	32	179,292	5.0	27.9
	Forestburg	936	1	7,000	1.1	7.48	19	142,659	2.0	15.2
	Lougheed	279	1	100	3.6	0.36	5	18,908	1.8	6.8
	Sedgewick	877	.	.	.	.	9	199,947	1.0	22.8
	Alliance	184	.	.	.	.	3	43,905	1.6	23.9
	Galahad	176	.	.	.	.	5	17,609	2.8	10.0
	Heisler	220	.	.	.	.	6	91,471	2.7	41.6
	Killam	1,032	.	.	.	.	10	242,349	1.0	23.5
	Strome	267	.	.	.	.	12	319,040	4.5	119.5
	Total	9,705	42	546,848	4.3	56.35	527	4,567,058	5.4	47.06
County 30	Lamont Cty #30	4,287	35	372,864	8.2	86.98	336	2,762,942	7.8	64.4
	Lamont	1,560	5	125,168	3.2	80.24	30	327,839	1.9	21.0
	Andrew	485	1	1,500	2.1	3.09	19	666,758	3.9	137.5
	Bruderheim	1,203	2	92,594	1.7	76.97	28	340,669	2.3	28.3
	Chipman	239	.	.	.	.	5	51,152	2.1	21.4
	Mundare	156	.	.	.	.	22	136,259	14.1	87.3
	Total	7,930	43	592,126	5.4	74.67	440	4,285,619	5.6	54.04
County 31	Parkland Cty #31	20,926	101	1,706,335	4.8	81.54	1072	19,864,507	5.1	94.9
	Stony Plain	6,689	9	31,809	1.3	4.76	103	562,266	1.5	8.4
	Edmonton Beach S.V.	332	1	17,000	3.0	51.20	7	89,154	2.1	26.9
	Entwistle	478	4	89,017	8.4	186.23	20	261,003	4.2	54.6
	Lakeview S.V.	27	1	13,427	37.0	497.30	1	13,427	3.7	49.7
	Seba Beach	103	1	70,645	9.7	685.87	3	87,645	2.9	85.1
	Wabamun	603	2	25,900	3.3	42.95	11	79,075	1.8	13.1
	Kapasiwin S.V.	3	.	.	.	.	1	500	33.3	16.7
	Total	29,161	119	1,954,133	4.1	67.01	1218	20,957,577	4.2	71.87
M.D. 1	Cypress M.D. #1	4,795	53	279,914	11.1	58.38	561	7,756,551	11.7	161.8
	Irvine	304	3	17,905	9.9	58.90	18	5,627,293	5.9	1851.1
	Redcliff	3,834	12	129,209	3.1	33.70	135	1,334,578	3.5	34.8
	Total	8,933	68	427,028	7.6	47.80	714	14,718,422	8.0	164.76
M.D. 6	Cardston M.D. #6	4,434	31	522,748	7.0	117.90	288	3,268,256	6.5	73.7
	Cardston	3,497	3	8,881	0.9	2.54	102	3,004,871	2.9	85.9
	Magrath	1,637	6	1,262	3.7	0.77	69	526,961	4.2	32.2
	Glenwood	305	1	550	3.3	1.80	12	137,943	3.9	45.2
	Hillspring	251	1	7,141	4.0	28.45	6	19,682	2.4	7.8
	Total	10,124	42	540,582	4.2	53.40	477	6,957,713	4.7	68.72

MUNICIPAL FIRE LOSS STATISTICS
FOR THE YEAR ENDING DECEMBER 31, 1989
AND FOR THE 10- YEAR PERIOD.....(CONTINUED).....

Municipality		Population	Year Ending December 31, 1990				10 Yr. Total		10 Yr. Average	
			Fire Count	$ Loss	Fire Rate	Per Capita $ Loss	Fire Count	$ Loss	Fire Rate	Per Capita $ Loss
M.D. 8	Bighorn M.D. #8	1,138	3	12,735	2.6	11.19	71	1,611,537	6.2	141.6
	Canmore	5,324	6	79,593	1.1	14.95	96	1,018,366	1.8	19.1
	Ghost Lake S.V.	28	.	.	.	.	3	11,128	10.7	39.7
	Total	6,490	9	92,328	1.4	14.23	170	2,641,031	2.6	40.72
M.D. 9	Pincher Creek M.D. #9	3,093	68	1,136,268	22.0	367.37	251	3,972,772	8.1	128.4
	Pincher Creek	3,800	6	157,247	1.6	41.38	79	1,503,174	2.1	39.6
	Cowley	290	.	.	.	.	10	163,723	3.4	56.5
	Total	7,183	74	1,293,515	10.3	180.08	340	5,639,669	4.7	78.51
M.D. 14	Taber M.D. #14	5,284	49	348,930	9.3	66.04	492	5,895,191	9.3	111.6
	Taber	6,382	15	259,429	2.4	40.65	182	8,393,911	2.9	131.5
	Vauxhall	984	3	68,341	3.0	69.45	16	381,651	1.6	38.8
	Grassy Lake	244	1	12,108	4.1	49.62	25	1,579,649	10.2	647.4
	Barnwell	484	.	.	.	.	7	28,095	1.4	5.8
	Total	13,378	68	688,808	5.1	51.49	722	16,278,497	5.4	121.68
M.D. 26	Willow Creek MD.#26	4,748	28	118,099	5.9	24.87	386	2,815,468	8.1	59.3
	Nanton	1,523	1	9,000	0.7	5.91	51	938,813	3.3	61.6
	Claresholm	3,382	7	12,339	2.1	3.65	112	2,570,406	3.3	76.0
	Ft. Macleod	3,123	7	30,237	2.2	9.68	70	491,276	2.2	15.7
	Granum	371	7	22,132	18.9	59.65	30	3,432,450	8.1	925.2
	Stavely	505	.	.	.	.	12	515,445	2.4	102.1
	Total	13,652	50	191,807	3.7	14.05	661	10,763,858	4.8	78.84
M.D. 31	Foothills M.D. #31	9,432	56	552,193	5.9	58.54	544	9,040,102	5.8	95.8
	High River	5,754	4	12,809	0.7	2.23	87	1,263,738	1.5	22.0
	Black Diamond	1,567	7	17,561	4.5	11.21	46	408,093	2.9	26.0
	Okotoks	6,380	11	2,752	1.7	0.43	75	651,389	1.2	10.2
	Turner Valley	1,317	4	21,348	3.0	16.21	32	453,465	2.4	34.4
	Blackie	266	.	.	.	.	4	204,630	1.5	76.9
	Longview	286	.	.	.	.	7	180,459	2.4	63.1
	Total	25,002	82	606,663	3.3	24.26	795	12,201,876	3.2	48.80
M.D. 34	Acadia M.D. # 34	618	5	50,930	8.1	82.41	29	170,684	4.7	27.6
	Empress	229	.	.	.	.	7	321,827	3.1	140.5
	Total	847	5	50,930	5.9	60.13	36	492,511	4.3	58.15
M.D. 44	Rocky View M.D. #44	17,484	100	1,320,071	5.7	75.50	1525	19,766,719	8.7	113.1
	Cochrane	4,898	11	9,726	2.2	1.99	144	1,704,198	2.9	34.8
	Crossfield	1,480	1	8,000	0.7	5.41	24	58,217	1.6	3.9

MUNICIPAL FIRE LOSS STATISTICS
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AND FOR THE 10- YEAR PERIOD.....(CONTINUED).....

Municipality		Population	Year Ending December 31, 1990				10 Yr. Total		10 Yr. Average	
			Fire Count	$ Loss	Fire Rate	Per Capita $ Loss	Fire Count	$ Loss	Fire Rate	Per Capita $ Loss
M.D. 44	Irricana	786	2	98,000	2.5	124.68	9	126,968	1.1	16.2
	Chestermere Lake S.V.	782	3	45,618	3.8	58.34	23	501,858	2.9	64.2
	Beiseker	576	.	.	.	.	20	501,307	3.5	87.0
	Total	26,006	117	1,481,415	4.5	56.96	1745	22,659,267	6.7	87.13
M.D. 47	Starland M.D. #47	2,120	14	32,038	6.6	15.11	134	1,510,683	6.3	71.3
	Delia	223	2	80,751	9.0	362.11	7	209,295	3.1	93.9
	Rumsey	70	2	4,437	28.6	63.39	7	48,726	10.0	69.6
	Morrin	252	.	.	.	.	4	36,834	1.6	14.6
	Munson	156	.	.	.	.	2	3,370	1.3	2.2
	Total	2,821	18	117,226	4.5	56.96	154	1,808,908	6.7	87.13
M.D. 48	Kneehill M.D. #48	4,996	34	587,761	6.8	117.65	321	4,493,479	6.4	89.9
	Three Hills	3,324	5	616,406	1.5	185.44	63	1,163,861	1.9	35.0
	Acme	457	.	.	.	.	9	38,874	2.0	8.5
	Trochu	892	.	.	.	.	20	300,233	2.2	33.7
	Carbon	429	.	.	.	.	4	6,787	0.9	1.6
	Linden	417	.	.	.	.	8	93,994	1.9	22.5
	Torrington	209	.	.	.	.	8	38,368	3.8	18.4
	Total	10,724	39	1,204,167	3.6	112.29	433	6,135,596	4.0	57.21
M.D. 52	Provost M.D. #52	2,725	14	61,313	5.1	22.50	246	2,573,583	9.0	94.4
	Provost	1,797	3	65,300	1.7	36.34	42	207,750	2.3	11.6
	Amisk	207	1	2,100	4.8	10.14	6	17,756	2.9	8.6
	Czar	181	.	.	.	.	6	107,366	3.3	59.3
	Hughenden	280	.	.	.	.	11	143,226	3.9	51.2
	Total	5,190	18	128,713	3.5	24.80	311	3,049,681	6.0	58.76
M.D. 61	Wainwright M.D. #61	3,937	20	216,174	5.1	54.91	332	4,635,738	8.4	117.7
	Wainwright	4,713	11	494,761	2.3	104.98	148	1,492,330	3.1	31.7
	Irma	484	1	150	2.1	0.31	8	174,729	1.7	36.1
	Edgerton	399	1	20,000	2.5	50.13	22	304,237	5.5	76.2
	Chauvin	400	.	.	.	.	13	276,934	3.2	69.2
	Total	9,923	33	731,085	3.3	73.68	523	6,883,968	5.3	69.37
M.D. 77	Brazeau M.D. #77	5,448	31	790,316	5.7	145.07	275	5,265,664	5.0	96.7
	Drayton Valley	5,474	17	620,229	3.1	113.30	167	1,737,500	3.1	31.7
	Total	10,922	48	1,410,545	4.4	129.15	442	7,003,164	4.1	64.12
M.D. 87	Bonnyville M.D. #87	10,384	44	1,173,256	4.2	112.99	446	4,994,106	4.3	48.1

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AND FOR THE 10- YEAR PERIOD.....(CONTINUED).....

Municipality		Population	Year Ending December 31, 1990				10 Yr. Total		10 Yr. Average	
			Fire Count	$ Loss	Fire Rate	Per Capita $ Loss	Fire Count	$ Loss	Fire Rate	Per Capita $ Loss
M.D. 87	Bonnyville	5,575	8	13,409	1.4	2.41	173	3,867,474	3.1	69.4
	Cold Lake	3,604	8	56,125	2.2	15.57	93	1,109,213	2.6	30.8
	Grand Centre	3,715	12	18,256	3.2	4.91	117	2,902,931	3.1	78.1
	Bonnyville Be/Pelican N.	62	.	.	.	.	2	20,176	3.2	32.5
	Glendon	480	.	.	.	.	10	101,595	2.1	21.2
	Pelican Narrows S.V.	79	.	.	.	.	4	16,107	5.1	20.4
	Total	23,899	72	1,261,046	3.0	52.77	845	13,011,602	3.5	54.44
M.D. 90	Sturgeon M.D. #90	14,019	63	1,532,491	4.5	109.32	784	16,667,302	5.6	118.9
	Morinville	5,860	10	212,179	1.7	36.21	84	924,648	1.4	15.8
	Gibbons	2,491	1	741	0.4	0.30	40	420,588	1.6	16.9
	Bon Accord	1,362	4	7,780	2.9	5.71	20	75,393	1.5	5.5
	Legal	954	3	2,715	3.1	2.85	25	299,330	2.6	31.4
	Redwater	2,079	10	223,598	4.8	107.55	44	915,242	2.1	44.0
	Sandy Beach S.V.	108	.	.	.	.	2	161,000	1.9	149.1
	Total	26,873	91	1,979,504	3.4	73.66	999	19,463,503	3.7	72.43
M.D. 92	Westlock M.D. #92	6,992	36	562,289	5.1	80.42	357	5,378,000	5.1	76.9
	Westlock	4,507	8	63,322	1.8	14.05	96	1,684,320	2.1	37.4
	Clyde	428	.	.	.	.	15	108,443	3.5	25.3
	Total	11,927	44	625,611	3.7	52.45	468	7,170,763	3.9	60.12
M.D. 99	Clearwater M.D. #99	9,848	41	2,878,937	4.2	292.34	432	8,963,266	4.4	91.0
	Rocky Mountain House	5,343	6	111,214	1.1	20.81	136	2,027,302	2.5	37.9
	Caroline	387	.	.	.	.	12	68,164	3.1	17.6
	Total	15,578	47	2,990,151	3.0	191.95	580	11,058,732	3.7	70.99
M.D. 130	Smoky River M.D.#130	2,853	18	157,168	6.3	55.09	240	4,110,316	8.4	144.1
	Falher	1,172	3	130,107	2.6	111.01	32	788,485	2.7	67.3
	Girouxville	367	1	1,180	2.7	3.22	12	61,030	3.3	16.6
	McLennan	1,047	2	4,050	1.9	3.87	34	899,013	3.2	85.9
	Donnelly	404	4	418,850	9.9	1036.76	18	647,033	4.5	160.2
	Total	5,843	28	711,355	4.8	121.74	336	6,505,877	5.8	111.34
M.D. 133	Spirit River M.D. #133	848	15	167,423	17.7	197.43	153	1,897,283	18.0	223.7
	Spirit River	1,086	4	371,567	3.7	342.14	26	569,614	2.4	52.5
	Rycroft	672	2	3,838	3.0	5.71	21	141,341	3.1	21.0
	Total	2,606	21	542,828	8.1	208.30	200	2,608,238	7.7	100.09

MUNICIPAL FIRE LOSS STATISTICS
FOR THE YEAR ENDING DECEMBER 31, 1989
AND FOR THE 10- YEAR PERIOD.....(CONTINUED).....

Municipality		Population	Year Ending December 31, 1990				10 Yr. Total		10 Yr. Average	
			Fire Count	$ Loss	Fire Rate	Per Capita $ Loss	Fire Count	$ Loss	Fire Rate	Per Capita $ Loss
M.D. 135	Peace River M.D. #135	1,527	9	118,951	5.9	77.90	156	1,932,178	10.2	126.5
	Berwyn	661	1	131,518	1.5	198.97	12	323,218	1.8	48.9
	Grimshaw	2,753	10	173,693	3.6	63.09	76	1,315,428	2.8	47.8
	Peace River	6,644	26	333,746	3.9	50.23	254	4,119,272	3.8	62.0
	Total	11,585	46	757,908	4.0	65.42	498	7,690,096	4.3	66.38
M.D. 136	Fairview M.D. #136	1,903	41	418,682	21.5	220.01	234	2,226,265	12.3	117.0
	Fairview	3,281	24	221,301	7.3	67.45	139	3,082,822	4.2	94.0
	Total	5,184	65	639,983	12.5	123.45	373	5,309,087	7.2	102.41
I.D. 4	Id 4	150	.	.	.	.	10	165,562	6.7	110.4
	Total	150	.	.	.	.	10	165,562	6.7	110.4
I.D. 5	Id 5	409	11	25,961	26.9	63.47	46	939,111	11.2	229.6
	Total	409	11	25,961	26.9	63.47	46	939,111	11.2	229.6
I.D. 6	Crowsnest Pass	6,912	16	247,628	2.3	35.83	203	3,114,247	2.9	45.1
	Id 6	128	.	.	.	.	22	409,585	17.2	320.0
	Total	7,040	16	247,628	2.3	35.83	225	3,523,832	3.2	50.05
I.D. 7	Id 7	1,158	8	61,075	6.9	52.74	79	620,530	6.8	53.6
	Total	1,158	8	61,075	6.9	52.74	79	620,530	6.8	53.6
I.D. 8	Id 8	7	3	4,587	428.6	655.29	9	8,888	128.6	127.0
	Total	7	3	4,587	428.6	655.29	9	8,888	128.6	127.0
I.D. 9	Id 9	1,461	5	456,109	3.4	312.19	46	1,074,387	3.1	73.5
	Banff	6,924	10	123,962	1.4	17.90	92	5,435,526	1.3	78.5
	Total	8,385	15	580,071	1.8	69.18	138	6,509,913	1.7	77.64
I.D. 12	Id 12	300	6	220,798	20.0	735.99	40	860,512	13.3	286.8
	Jasper	4,175	4	58,037	1.0	13.90	66	793,265	1.6	19.0
	Total	4,475	10	278,835	2.2	62.31	106	1,653,777	2.4	36.96
I.D. 13	Id 13	29	.	.	.	.	4	76,875	13.8	265.1
	Total	29	.	.	.	.	4	76,875	13.8	265.1
I.D. 14	Id 14	8,192	53	1,127,051	6.5	137.58	624	35,981,398	7.6	439.2
	Evansburg	750	6	60,050	8.0	80.07	27	283,222	3.6	37.8
	Edson	7,323	20	152,988	2.7	20.89	165	2,421,394	2.3	33.1
	Hinton	9,893	27	465,084	2.7	47.01	280	3,560,717	2.8	36.0
	Wildwood	344	.	.	.	.	9	211,356	2.6	61.4
	Total	26,502	106	1,805,173	4.0	68.11	1105	42,458,087	4.2	160.21
I.D. 15	Id 15	2,854	11	277,793	3.9	97.33	195	3,801,693	6.8	133.2
	Whitecourt	6,692	25	347,152	3.7	51.88	208	1,917,457	3.1	28.7

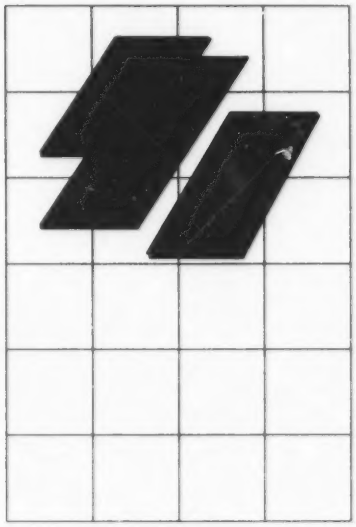
MUNICIPAL FIRE LOSS STATISTICS
FOR THE YEAR ENDING DECEMBER 31, 1989
AND FOR THE 10- YEAR PERIOD.....(CONTINUED).....

I.D. 15	Ft. Assiniboine	214	1	701	4.7	3.28	7	125,534	3.3	58.7
	Total	9,760	37	625,646	3.8	64.10	410	5,844,684	4.2	59.88
I.D. 16	Id 16	5,332	58	1,076,459	10.9	201.89	517	13,592,506	9.7	254.9
	Valleyview	2,218	5	49,481	2.3	22.31	70	920,290	3.2	41.5
	Fox Creek	2,068	1	200	0.5	0.10	30	739,043	1.5	35.7
	Grande Cache	3,654	7	140,973	1.9	38.58	46	942,830	1.3	25.8
	Total	13,272	71	1,267,113	5.4	95.47	663	16,194,669	5.0	122.02
I.D. 17	Id 17	12,534	107	4,039,797	8.5	322.31	1187	27,851,447	9.5	222.2
	High Prairie	2,817	9	62,047	3.2	22.03	94	4,805,091	3.3	170.6
	Swan Hills	2,412	3	201	1.2	0.08	56	631,775	2.3	26.2
	Slave Lake	5,611	11	100,642	2.0	17.94	124	2,339,940	2.2	41.7
	Nampa	464	1	107,000	2.2	230.60	6	223,951	1.3	48.3
	Kinuso	282	.	.	.	.	13	109,385	4.6	38.8
	Total	24,120	131	4,309,687	5.4	178.68	1480	35,961,589	6.1	149.01
I.D. 18	Id 18	9,193	37	653,112	4.0	71.04	843	160,683,167	9.2	1747.9
	Lac La Biche	2,553	11	88,820	4.3	34.79	106	2,151,283	4.2	84.3
	Plamondon	249	.	.	.	.	13	261,983	5.2	105.2
	Total	11,995	48	741,932	4.0	61.85	962	163,096,433	8.0	1359.7
I.D. 19	Id 19	1,620	12	426,014	7.4	262.97	121	2,898,125	7.5	178.9
	Wanham	238	5	362,583	21.0	1523.46	10	442,292	4.2	185.8
	Eaglesham	183	1	100	5.5	0.55	6	28,355	3.3	15.5
	Total	2,041	18	788,697	8.8	386.43	137	3,368,772	6.7	165.05
I.D. 20	Id 20	2,922	8	126,581	2.7	43.32	145	2,425,152	5.0	83.0
	Total	2,922	8	126,581	2.7	43.32	145	2,425,152	5.0	83.0
I.D. 21	Id 21	2,992	31	151,308	10.4	50.57	253	3,043,730	8.5	101.7
	Hines Creek	513	3	23,798	5.8	46.39	32	1,165,280	6.2	227.2
	Total	3,505	34	175,106	9.7	49.96	285	4,209,010	8.1	120.09
I.D. 22	Id 22	4,451	46	1,092,351	10.3	245.42	398	7,525,780	8.9	169.1
	Manning	1,144	3	16,982	2.6	14.84	42	2,677,653	3.7	234.1
	Total	5,595	49	1,109,333	8.8	198.27	440	10,203,433	7.9	182.37
I.D. 23	Id 23	6,942	29	1,699,760	4.2	244.85	435	9,867,340	6.3	142.1
	High Level	3,004	9	44,803	3.0	14.91	123	4,056,630	4.1	135.0
	Rainbow Lake	1,146	5	490,753	4.4	428.23	26	2,084,220	2.3	181.9
	Total	11,092	43	2,235,316	3.9	201.53	584	16,008,190	5.3	144.32
I.D. 24	Id 24	282	.	.	.	.	7	5,281,013	2.5	1872.7
	Total	282	.	.	.	.	7	5,281,013	2.5	1872.7

MUNICIPAL FIRE LOSS STATISTICS
FOR THE YEAR ENDING DECEMBER 31, 1989
AND FOR THE 10- YEAR PERIOD.....(CONTINUED).....

Municipality		Population	Year Ending December 31, 1990				10 Yr. Total		10 Yr. Average	
			Fire Count	$ Loss	Fire Rate	Per Capita $ Loss	Fire Count	$ Loss	Fire Rate	Per Capita $ Loss
Indian Reserves	Indian Reserves	33,733	127	3,488,291	3.8	103.41	960	21,736,779	2.8	64.4
	Total	33,733	127	3,488,291	3.8	103.41	960	21,736,779	2.8	64.4
S.A. 2	SA 2	2,553	19	335,666	7.4	131.48	180	2,334,038	7.1	91.4
	Hanna	3,017	4	10,789	1.3	3.58	57	815,198	1.9	27.0
	Total	5,570	23	346,455	4.1	62.20	237	3,149,236	4.3	56.54
S.A. 3	SA 3	1,691	7	25,518	4.1	15.09	97	1,506,616	5.7	89.1
	Cereal	251	.	.	.	.	2	62,139	0.8	24.8
	Oyen	1,020	.	.	.	.	23	89,722	2.3	8.8
	Youngstown	294	.	.	.	.	8	79,786	2.7	27.1
	Total	3,256	7	25,518	2.2	7.84	130	1,738,263	4.0	53.39
S.A. 4	SA 4	1,766	17	382,555	9.6	216.62	114	1,681,780	6.5	95.2
	Veteran	312	1	12,746	3.2	40.85	10	1,775,962	3.2	569.2
	Consort	700	3	104,050	4.3	148.64	16	143,259	2.3	20.5
	Total	2,778	21	499,351	7.6	179.75	140	3,601,001	5.0	129.63
Cities	Calgary City	692,885	1744	21,863,275	2.5	31.55	23273	163,119,555	3.4	23.5
	Camrose City	12,968	12	1,665,762	0.9	128.45	286	5,399,482	2.2	41.6
	Drumheller City	6,366	15	426,372	2.4	66.98	183	3,429,858	2.9	53.9
	Edmonton City	605,538	1571	18,857,329	2.6	31.14	15991	159,431,900	2.6	26.3
	Grande Prairie City	27,558	123	701,451	4.5	25.45	1281	7,735,689	4.6	28.1
	Lethbridge City	60,614	176	1,906,165	2.9	31.45	2377	14,132,717	3.9	23.3
	Lloydminster City	10,201	30	1,278,086	2.9	125.29	269	4,100,408	2.6	40.2
	Medicine Hat City	42,929	122	930,209	2.8	21.67	1868	17,030,972	4.4	39.7
	Red Deer City	56,922	114	735,255	2.0	12.92	1685	11,541,328	3.0	20.3
	Wetaskiwin City	10,203	23	264,351	2.3	25.91	223	7,044,947	2.2	69.0
	St. Albert City	40,707	71	483,970	1.7	11.89	944	4,318,191	2.3	10.6
	Ft. McMurray City	33,698	124	3,574,592	3.7	106.08	1472	15,396,768	4.4	45.7
	Leduc City	13,566	31	323,597	2.3	23.85	286	2,453,253	2.1	18.1
	Airdrie City	11,904	18	7,130,261	1.5	598.98	189	8,531,341	1.6	71.7
	Ft. Saskatchewan City	11,753	16	771,171	1.4	65.61	235	13,183,590	2.0	112.2
	Spruce Grove City	12,403	18	514,064	1.5	41.45	347	3,337,622	2.8	26.9
	Total	1,650,215	4208	61,425,910	2.6	37.22	50909	440,187,621	3.1	26.67

SECTION 3



Glossary

Fire Commissioner's
Statistical Report

1 9 9 0

Glossary

Act or Omission

The human element by which someone has done something (an act) or failed to do something (an omission). The act or omission indicates whether the fire was deliberate, neglectful or accidental.

Incendiary or Set Fires - includes arson, suspected incendiarism, riot, mischief or vandalism.

Misuse of Source of Ignition - includes disposal of smoker's material, thawing, inadequate control of an open fire, children playing with source of ignition, welding or cutting too close to combustible material or torch too close to combustible material.

Misuse of Material Ignited - includes fuel spilled accidentally, improper fuelling technique, cleaning or washing parts, improper container, overheated cooking oil, combustible placed too close to heat, and improper storage.

Mechanical and Electrical Failure or Malfunction - includes part failure, automatic or manual control failure, electrical short circuit and part worn out.

Construction, Design or Installation Deficiency - includes construction or design deficiency, installation too close to a combustible, other installation deficiency or overfusing.

Misuse of Equipment - overfuelling, includes any misuse of equipment or tools.

Human Failing - includes person asleep, temporary loss of judgement, physical disability, panic, influence of alcohol or drugs and ignorance of hazard.

Area of Origin

The area of a building or vehicle where the fire started.

Means of Egress - the area allowing an individual transit or a way of going out. Includes hallway, stairway, escalator, lobby and elevator.

Assembly, Sales Area - areas where groups of people gather. Includes theatre, arena, lounge, living room, sales or show room, library, museum and sports facility.

Function Area - the area where a mode of action or activity is undertaken. Includes sleeping area, dining area, bar, washroom, office, laboratory, printing and photographic reproduction area, kitchen, laundry room, operating room, performance area and manufacturing area.

Storage Area - the area inside a building where items are stored. Includes product storage area, closet, equipment area, records storage area, shipping and receiving area, trash and rubbish area, vehicle garage and agricultural product storage area.

Service Facilities - conveyance items such as dumbwaiters, service shafts, laundry and garbage chutes, heating and cooking ducts and chimneys or gas vents.

Structural Area - includes crawl space, balcony, ceiling and floor assembly, wall assembly, exterior wall or exterior roof and awning or canopy.

Vehicle Area - includes engine area, fuel area, control area, passenger area and cargo area.

Outside Area - includes open area such as lawn, field or park, court, patio, parking area, outdoor storage area and trash or rubbish area.

Death

A person killed accidentally as a direct result of a fire or a person who dies from a fire injury within one year following the date on which the injury was sustained.

Fire Death - refers to a person who died as a direct result of a fire, either by smoke inhalation or burns.

Death Involving Fire - refers to a person

who was in a place where fire occurred, but who may have died from a cause other than the fire itself (eg. a person who dies in an automobile accident where the vehicle catches fire prior to death, a suicide by burning or asphyxia, an incendiary fire set for the specific reason of killing).

Fuel or Energy

Is the fuel associated with the source of ignition. Includes coal, wood, fuel oil, gasoline, natural gas or other fuel gases, smoker's material, electricity, lightning or exposures.

Ignition Scenario

The combination of three components - the source of ignition, material first ignited and act or omission - in the chain of events that lead to a fire.

A small number of ignition scenarios recur in the ignition of fires that account for the majority of fire incidents. Identification of these helps locate problems more specifically for the design of appropriate prevention strategies.

Injuries

A person accidentally injured as a direct result of a fire (a member of the fire department accidentally injured while in the process of fighting a fire or injured as a result of an accident while en route to or returning from the scene of an actual fire is considered a fire action injury).

Minor Injury - an injury that does not require hospitalization of over a 24-hour period or absence from work of not more than one full day.

Light Injury - an injury that required admission to a hospital of over 24 to 48 hours and/or absence from work for a period of two to fifteen days.

Serious Injury - an injury that required admission to a hospital for a period of more than 48 hours and/or an absence from work for a period exceeding fifteen days.

Material First Ignited

The actual material that ignites and creates the fire condition.

Structural Components, Finish Materials - includes roof covering, wall covering, floor covering, structural component, ceiling covering and insulation.

Furniture, Furnishings - includes furniture, ironing board, mattress, bedding, drapery and broom, mop or brush.

Clothing, Textiles - includes clothing, fabric, fur and tarpaulin.

Wood, Paper Products - includes wood, wood shavings, paper, cardboard and paper stock.

Flammable Liquids - includes gasoline, fuel oil, flammable liquids, paint, varnish, tar, asphalt, polish and wax.

Flammable Gases - includes natural gas, propane, anaesthetic gas, acetylene and hydrogen.

Chemicals - includes starch, flour, cellulose nitrate, plastic, oxidizing material, magnesium and alloys, titanium, natural or synthetic rubber and ammonium nitrate.

Agricultural, Forestry Products - includes fibres, grains, hay, trees, felled timber, grass, fertilizer and manure.

Miscellaneous - includes coal, garbage, trash, oily rags and artificial trees.

Property Classification

The principal use or occupancy of the building.

Assembly - property for the gathering of persons for civic, political, travel, religious, social, educational or recreational purposes. Includes theatres, amusement or recreation places, schools, colleges, universities, churches, social or sport clubs, libraries and museums, eating establishments and passenger terminals.

Institutional - property for medical treatment, or care of persons suffering from illness, disease or infirmity, for the care of infants, convalescents or aged persons and for penal or corrective purposes. Includes prisons, jails, reformatories, homes for the aged, children's hospitals, hospitals and clinics.

Residential - property in which sleeping accommodation is provided for normal residential purposes. Includes one and two family dwellings, apartments, rooming or boarding houses, hotels, motels, dormitories and mobile homes.

Business and Personal Service - property for conducting business. Includes offices, personal services such as hairdressing and data processing or storage facilities.

Mercantile - property used for the display and sale of merchandise. Includes food and beverage sales, textile and clothing sales, furniture and appliance sales, books and specialty sales, recreational and hobby supply sales, repair shops, laundries, vehicle and boat sales and department or variety stores.

Industrial Manufacturing Properties - property where raw materials are transformed into new products and where the component parts of manufactured products are assembled. Includes chemical, petroleum, paint and plastic manufacturing; wood, furniture, and paper manufacturing; metal product and electrical equipment manufacturing; food processing; beverage, tobacco, soap and margarine manufacturing; textile manufacturing; footwear and wearing apparel manufacturing; and vehicle and related equipment manufacturing.

Storage Properties - property used primarily for the storage or sheltering of goods, merchandise, products, vehicles, or animals. Includes agricultural product storage; textile, fibre and clothing storage; processed food and beverage storage; flammable liquids, gas and petroleum products storage; wood, furniture, and paper products storage; chemical, paint and plastic storage; metal products, machinery, and electrical appliance storage and vehicle storage.

Special Property - Transportation Equipment - mainly outdoor property and transport equipment. Includes outdoor property, piers, buildings under construction or demolition, watercraft, rail transport vehicles, ground transport vehicles, aircraft and other special equipment.

Miscellaneous - includes laboratories, farm facilities, outbuildings, utilities, glass and pottery manufacturing, mining, communications and nucleonics.

Source of Ignition

The actual equipment, device or object which brings about ignition.

Cooking Equipment - includes stove, range, food warming appliance, deep fat fryer, broiler and portable cooking unit.

Heating Equipment - includes central heating unit, service water heater, space heater, fireplace, chimney, flue pipe and steam or hot water pipe.

Appliances and Equipment - includes dryer, air conditioning equipment, pressing iron and incinerator.

Smoker's Material and "Open" Flames - cigarettes, pipes, cigars and/or matches, lighters when used in conjunction with smoking. Includes matches and lighters not associated with smoker's material, candles, cutting torches, welding equipment and hot ashes.

Exposure - includes exposure from an attached or detached structure, lumber yard, open fire, forest, grass and brush.

Miscellaneous - includes internal combustion engine, heat treatment equipment, industrial oven, tar pot, fireworks, conveyors, commercial and industrial machinery and chemical reactions.

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